RESTORATION AND REVITALIZATION PROJECT OF HOUSE NO 1 in ZENGINLER DISTRICT BUYUK CIKMAZ - ANTAKYA

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ABSTRACT

RESTORATION AND REVITALIZATION PROJECT OF HOUSE NO 1 in ZENGINLER DISTRICT BUYUK CIKMAZ - ANTAKYA

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The subject of this thesis is House No: 1 in Zenginler District Büyük Çıkmaz in Anyakya. It is a remarkable example of traditional houses dating back to 19th century in Antakya.

The aim of this study is to prepare the restoration project of the building which is far too important for the city with its location, richness of its spatial and architectural elements, interventions have been done and provide to maintain its role in the city by re-functioning it.

The thesis includes the detailed description of the present state of the site and the selected building, historical background of Antakya, comparative study and restitution scheme. Finally, the restoration project including the intervention decisions and a proposal for a new function are prepared according to the evaluation of the information gathered throughout the study.

There are several steps to prepare the restoration project of a traditional building.

The first step is the historical research of both the selected building and the city where it is located. It is important, as it constitutes a background for the study.

In the second step of the project, the preparation of the complete graphical and verbal information of the building to the document the present conditions of it. Site survey is the base for this step. After all the information is gathered at the site, they are presented by graphical and verbal ways. Documentation includes the analyses of the building in various aspects like materials, construction technique and deformations.

The third step is the comparative study of the building between the same period traditional Antakya houses. These analyses are not only important for the position of the building in Antakya but also form a base for the restitution project.

The fourth step restitution consists of evaluation of traces to grasp the alterations done on the original building and thus it can be possible to establish the original scheme of the building.

In the last step, the restoration project is prepared. It covers the interventions that should be applied to the building and the proposal for the new function.

Keywords: Restoration, Antakya, Hatay, Traditional Houses

ÖZ

ANTAKYA ZENGİNLER MAHALLESİ BÜYÜK ÇIKMAZ 1 NO'LU EV RESTORASYON PROJESİ

Çağdaş Halit Bora
Yüksek Lisans, Mimarlık Bölümü, Restorasyon Anabilim Dalı
Tez Yöneticisi: Doç. Dr. N. Gül ASATEKİN

Mayıs 2008, 258 sayfa

Bu tezin konusu, Antakya'da Zenginler Mahallesi Büyük Çıkmaz'da bulunan ve 19. Asıra tarihlenen ve şehirdeki dikkate değer eski eserlerden biri olan 1 No'lu tarihi konuttur.

Öngörülen çalışmayla; içinde bulunduğu çevre için, konumu, uğradığı değişiklikler ve barındırdığı mimari elemanların zenginliği bakımından çok önemli olan bu yapının onarım projesinin hazırlanması, verilecek olan yeni işlev ile birlikte şehir sosyal yaşamına tekrar kazandırılarak yaşamını idame ettirmesinin sağlanması amaçlanmaktadır.

Bu çalışma kapsamında, bina ve çevresini içeren tanımlama yapılmakta, kentin tarihi geçmişi araştırılmakta, yapının özgün durumunu saptamak maksadıyla karşılaştırmalı çalışma ve restitüsyon projesi hazırlanmaktadır. Son olarak, toplanan tüm bilgilerin değerlendirilmesi çerçevesinde restorasyon projesi hazırlanmaktadır.

Anahtar Kelimeler: Restorasyon, Antakya, Hatay, Geleneksel konutlar

To the memory of my mother

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I would like to thank to Bora Işık who devoted to help me during the site survey and also Kemal Gülcen for his valuable support during the measurement process.

I would like to express special thanks to Assoc. Prof. Dr. Alpay Özdural who played an important role in my life. Rest in peace.

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CHAPTER 1

INTRODUCTION

1.1. AIM OF THE STUDY

Antakya is an important Anatolian city which has the unique examples of the civil architecture.

It has first and third degree archaeological sites, “höyük”s and an urban site registered in 1980’s. The latest conservation plan of the settlement prepared in 1995 and the rules were determined for the interventions in the borders of the urban site.

As a matter of fact, the traditional houses in Antakya, like those in the other cities of Turkey, face with the treat of abandonment due to changes in demands of the occupants and to changes of their living conditions accordingly. Another drawback, largely planned houses in this region are too large to use as nuclear families today. Therefore, they are generally rented by lower income families who cannot afford the maintenance of the houses. Indeed, people are not aware of the term “restoration” due to especially lack of education. As a result of this, there was a dangerous demolishment process for the traditional buildings in Antakya.

In this respect, the aim of this study is to prepare the restoration project of a traditional house in Antakya, which would exhibit itself to the people as a model of restored and revitalized building and would constitute a precedent for their visual knowledge.

1.2. SELECTION OF THE BUILDING

The selected building for this study is one of the traditional houses that had remarkably valuable but have not yet been registered. It is one of the best examples of large scale planned traditional houses in Antakya.

The building is far too important for the city with its location where was built right on centre of the tourist axis in-between the two important churches of the city, richness of its spatial and architectural features and the interventions which have been done.

1.3. METHODOLOGY OF THE STUDY

DOCUMENTATION OF THE BUILDING

Documentation of the Site Survey and the Building

The sketches of the plans, sections and façades were drawn on graph paper at site. After the sketches of the plans were drawn, the necessary sections to better explain the building were determined. It was noticed that all the walls in the building should be seen in the documentation work. Then, six sections were drawn.

However, photographical documentation is another important part of the building survey. The photographs of the all walls and spaces were taken to be used for places that were impossible to be measured at site.

The building was measured by using theodolite with hand measurement technique by conventional instruments. The linear and triangular methods were used in plans to control the theodolite points again. A horizontal axis, datum line was also formed by using theodolite for the sections and elevation and was accepted as 0.00 m level. After that, other measurement was taken by using steel tapes.

The cadastral plans were taken from the Municipality, conservation plans were taken from the Adana Conservation Committee. There was an also cadastral

plan which was prepared by French very exact and detailed during the mandate period and they were taken into hand from the governorship. These three maps were overlapped on each other and then the finalised plan was acquired by making the necessary corrections to this composed plan at site.

Graphical Documentation

Survey Drawings: Both for the architectural scaled drawings and for the analyses constituting the graphical information, the computer programs "AutoCAD", "arcview", "MSR" and "Photoshop" were used for the scaled drawings; first the sketches drawn at site and the points taken by using theodolite were transferred to the computer. Then the site plan in 1/500 scale; plans, sections and elevations in 1/50 scale; the architectural details in 1/10 scale and the system details in 1/20 scale were drawn.

The profiles of the arches were examined in 1/20 scale to explore their deformations and to establish their original form.

To draw unmeasured surfaces that were mentioned before, the Photoshop and msr programs were used. The photographs were rectified and adjusted, according to the measurement taken at the site and then they were transferred to the AutoCAD program. Finally, by using this program, the surfaces could be drawn.

Analysis Drawings: Falling under the heading of analysis drawings, the building was examined in four main stages to characterize it from an architectural point of view.

At the first stage of this part, the present state of the building materials determined according to their types. All topics presented in material analyses drawings are supported by visual observations which have been done during the site survey. In respect of these observations, the materials used in the building are categorized under the subtitles, i.e. stone, timber, lime, cement, earth-based, metal and others designated by thinking of their raw material contents and processed degrees. All subtitles have been indicated with colour

groups and materials have been differentiated from each other by the scala of chosen colours. For the purpose of understanding the physical characteristics of the building, the colours were mapped onto the survey drawings such as plans, sections and elevations.

At the second stage, the study proceeds with construction technique analysis. Considering the visual observations, a legend was occurred and diversity of the different techniques used in the building was shown by scalas of selected colour groups. By the way, coloured cross hatches were used to indicate the infill materials of the timber frame structures. After mapping of survey drawings according to legend headings, construction process of the building and the possible alterations have been tried to be visualised.

At the third phase, related with the construction technique drawings, structural system analysis had been done so as to see principles of the load distribution and behaviour of the structural elements under these loads. As can be seen on the drawings, six different points have been chosen and system sections of those parts have been drawn. In addition to this, each system section has been examined in detailed at three selected points. At the same time, parallel with the construction technique, every inputs – symbolised by the abbreviations in geometrical forms - of the legend have been penetrated onto key maps of ground and first floors.

Material decay analysis sheets include present physical conditions of the building materials and the existing structural situation of the building. Material deteriorations observed have been mapped on the survey drawings by using different coloured and styled hatches. Nevermore, the notations stand for the structural defect items.

HISTORICAL RESEARCH

Historical research comprises the history of Antakya and historical background of the building itself.

Information of the history of Antakya has been studied from the written and the illustrated sources. From the past to the present, beginning with the establishment of the city in Seleucids Period, Roman, Byzantine, Arab, Seljuk and Ottoman Periods has been revised respectively.

By touching on disasters such as earthquakes, fires and plagues, occupations and religious and political actions, not only the historical background of the city has been examined and also their effects on the city plan and the architectural environment have been taken into account. The old maps of the city has been found and overlapped to see the alterations.

As far as the building is concerned, in contrast to a large number of written sources and illustrations about the city, there is almost no written document or information without reckoning the French Maps which was drawn in the French Mandate Period and very limited oral information.

COMPARATIVE STUDY

Comparative study is based on the comparison of the studied house with the traditional Antakya houses.

In this context, the documents prepared during the study of Rest-507 course in 2002 Fall Semester[1] were revised and also the additional information gathered during the site survey has been carried out.

In light of the foregoing, the typologies have been prepared so as to understand the characteristics of the traditional Antakya houses yet to define the similarities of the selected building.

[1] The course has been given by Assoc. Prof. Dr. Neriman Şahin Güçhan, Assoc. Prof. Dr. Emre Mardan, Asist. Prof. Dr. A. Güliz Bilgin Altınöz, Res. Asist. Tuğba Akar, Res. Asist. Gökçe Şimşek and Res. Asist. Nurşen Kul. Çağdaş Halit Bora, Özge Başağaç, Emrah Köşkeroğlu, Ali Kemal İnce, Gül D. Demirel, Nida Naycı, Arzu Temizsoy and Yavuz S. Yılmaz have been attended to class and have prepared the project.

Building lot locations, plan schemes, façade organizations and the architectural features of the buildings compose the criteria taken into consideration during the preparation of typologies process.

Taking advantage of comparative study and the other above mentioned analyses, changes sheet has been prepared as a base to restitution part. Changes seen on the building includes additions, alterations and removals.

RESTITUTION

Restitution is composed of two stages; the phases of the building and the original scheme of the building.

There were some limitations to establish the phases of building. The phases of the building were determined according to the information derived from the building itself and according to the changes on the building together with comparative study. However, there was not enough data to establish the exact dates of the phases.

Then the restitution project was drawn to form the original scheme of the building. The reliability degrees have been defined for the proposed phases of the restitution.

RESTORATION

Preparing the restoration project is the final stage of the study. Drawing benefit from phases above, an evaluation process started. After a general evaluation about the present situation of the building, the value, potentials and problems of the building was stated precisely both for the building and the site.

There are two objectives defined for the restoration project; one of them is “improving the physical state of the building”, and the other one is “revitalising the building by proposing an appropriate new function”.

As far as physical improvement concerned, the changes occurred through the historical phases of the building like additions, alterations and removals have been evaluated once again according to their effects on the value of building and the adverse after effects on physical and functional layout. Furthermore, physical deformation stems from material decays and structural defects have been discussed for the further interventions that would be done.

On the other hand, the quality of the spaces, space and façade organisation of the building and architectural elements have been assessed by comparing between the original state of the building and the present situation. At that point, the quality of lighting and authentic circulation scheme has been revised.

On the whole, in reference to those evaluations, the restoration principles have been introduced. In the light of the restoration principles, the intervention decisions – further applications that would be done for the building - have been determined. Thus, the solutions of the physical problems of the building and the intervention scheme for the changes which the building subjected throughout its history have been organized.

Finally, the proposed new function and its detailed program presented both verbal and graphical ways considering the facts that the surrounding of the building, the needs of the people, the situation of the restored and revitalized traditional buildings in Antakya. With this research, it is aimed whether the proposed function was suitable for the Antakya and people as well as the building itself.

CHAPTER 2

DESCRIPTION

2.1. GEOGRAPHICAL POSITION OF ANTAKYA

Antakya is the centre city of Hatay province which is located in the Mediterranean Region at the south part of Turkey. The province is surrounded by Mediterranean from the west, Adana from the north-east, Osmaniye from north, Gaziantep from north-east and Syria from the south and east. There are two big cities in this province since the ancient times; one of them is Antakya and the other one is İskenderun (Selçuk 1972, 13)

> "Antioch was placed at the south-western corner of the Amik Plain, at the point where the Orontes[2] River, after flowing along the southern edge of the plain, enters a valley cut through the Mount Silpius[3]."
>
> (Glanville 1963, 11)

Today, the city was divided into two by Asi River. The vast majority of the old city was in-between the river and Habib Neccar Mountains which is 440 m. higher then the sea level (Türkiye Diyanet Vakfı İslam Ansiklopedisi – Volume 3 1991, 228). The new city is still developing through the plain.

[2] Orontes is the name of Asi River in the ancient period.
[3] Habib Neccar Montain was called as Mount Silpius in ancient period.

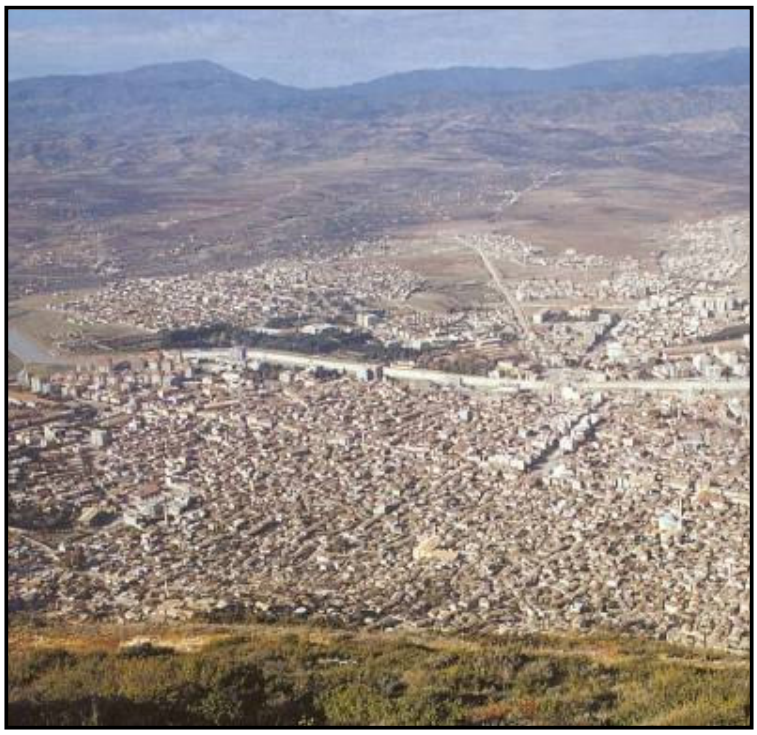


Figure 1: A View from Habib Neccar Mountains (http://pages.usherbrooke.ca/croisades/big_images/v_antioche_moderne_du_mont_silpius.jpg, last accessed on: 4 January 2008)

2.2. NEARBY ENVIRONMENT OF THE BUILDING

2.2.1. LOCATION OF THE BUILDING

The building selected for the study is located at right behind the Fevzi Çakmak Primary School also known as “Nuns School” in Antakya Historic Urban Site. This site is located in east part of the city and it is in between Asi River from the west and Mount Silpius from the east.

The building is on Gazipaşa Street which goes parallel to Kırk Asırlık Türk Yurdu Street that combines two important commercial and touristic axes known as Kurtuluş and Hürriyet streets.

2.2.2. GENERAL CHARACTERISTICS OF THE NEARBY ENVIRONMENT OF THE BUILDING

The building is located in an area that includes so many traditional buildings. Some of these traditional buildings are dated back to 19th Century and the others are dated back to French Mandate Period. The 19th Century traditional buildings also have some architectural features similar with French Mandate Period buildings. There are contemporary buildings in the site, as well.

The vast majority of the traditional buildings are used for residential purposes. There are also public buildings in the site. One of them is located right behind the selected building for this study and it is used as a primary school today. The service buildings belong to houses and they are either contemporary or traditional. Their dimensions are generally smaller then the others. Especially, the contemporary buildings are used for commercial purposes.

The number of storey that the buildings have changes from one up to three storeys. The traditional buildings have one or two storeys whereas the contemporary buildings have three storeys.

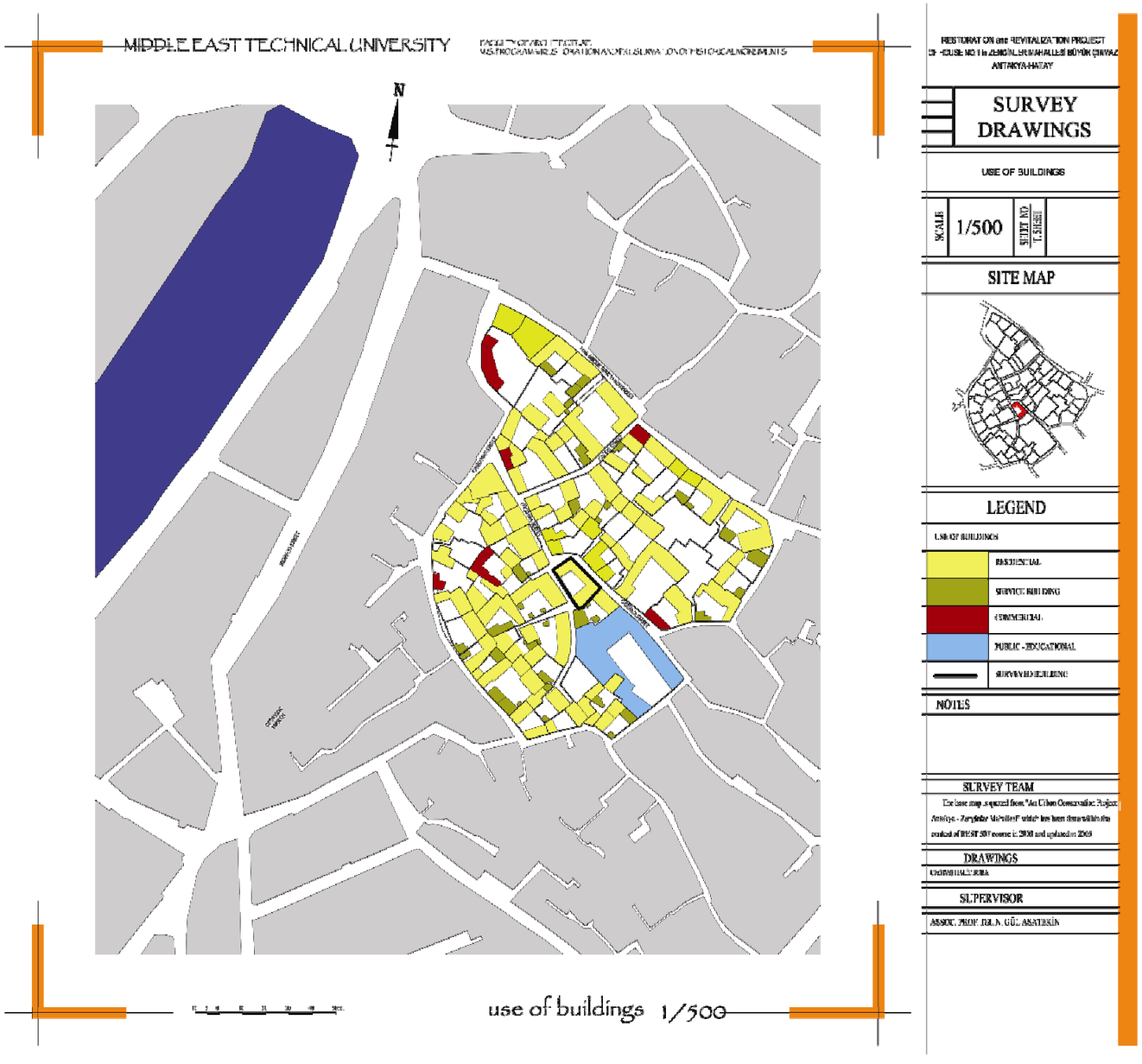


Illustration 1: Use of Building in Nearby Environment

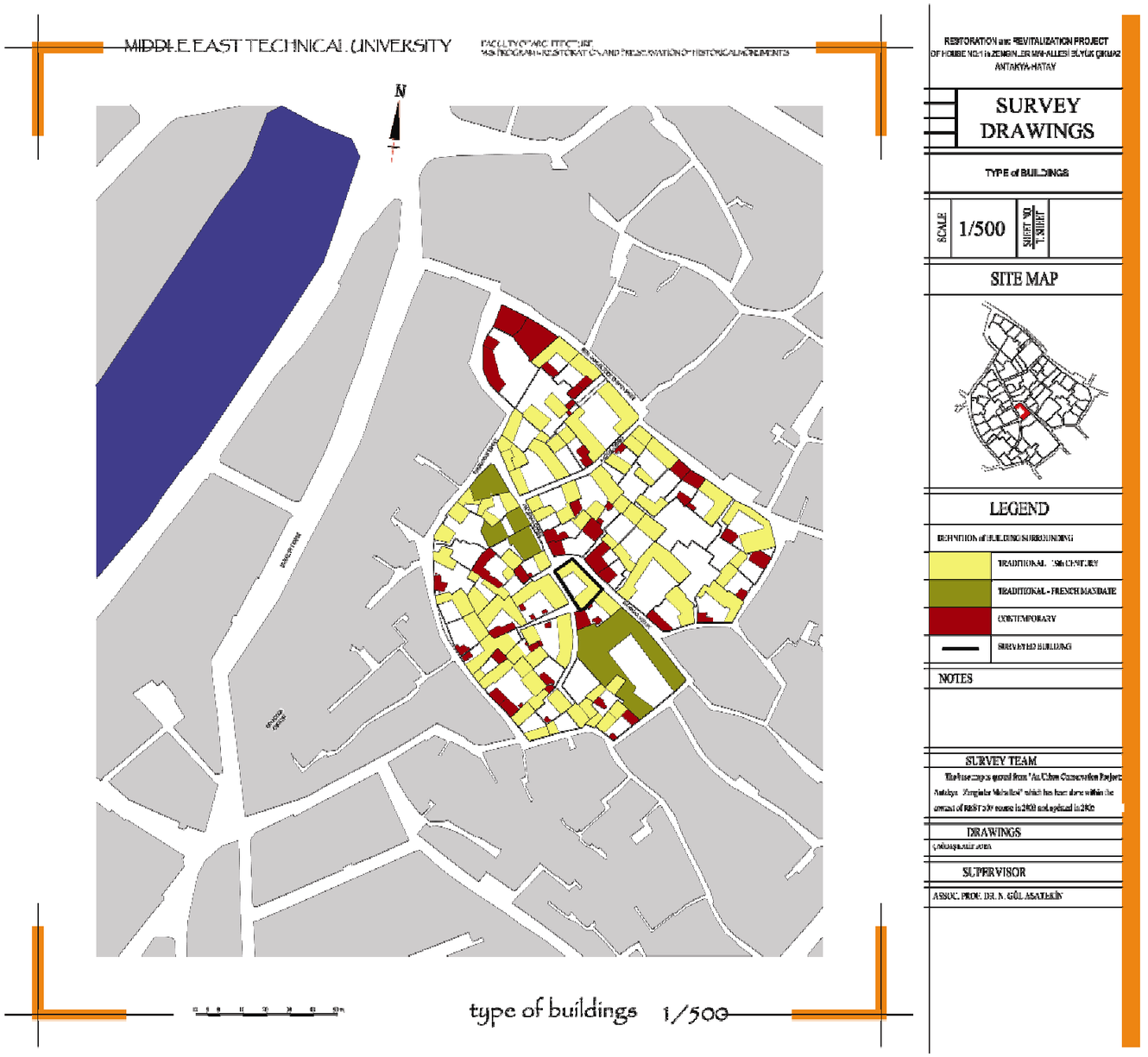


Illustration 2: Type of Buildings in Nearby Environment

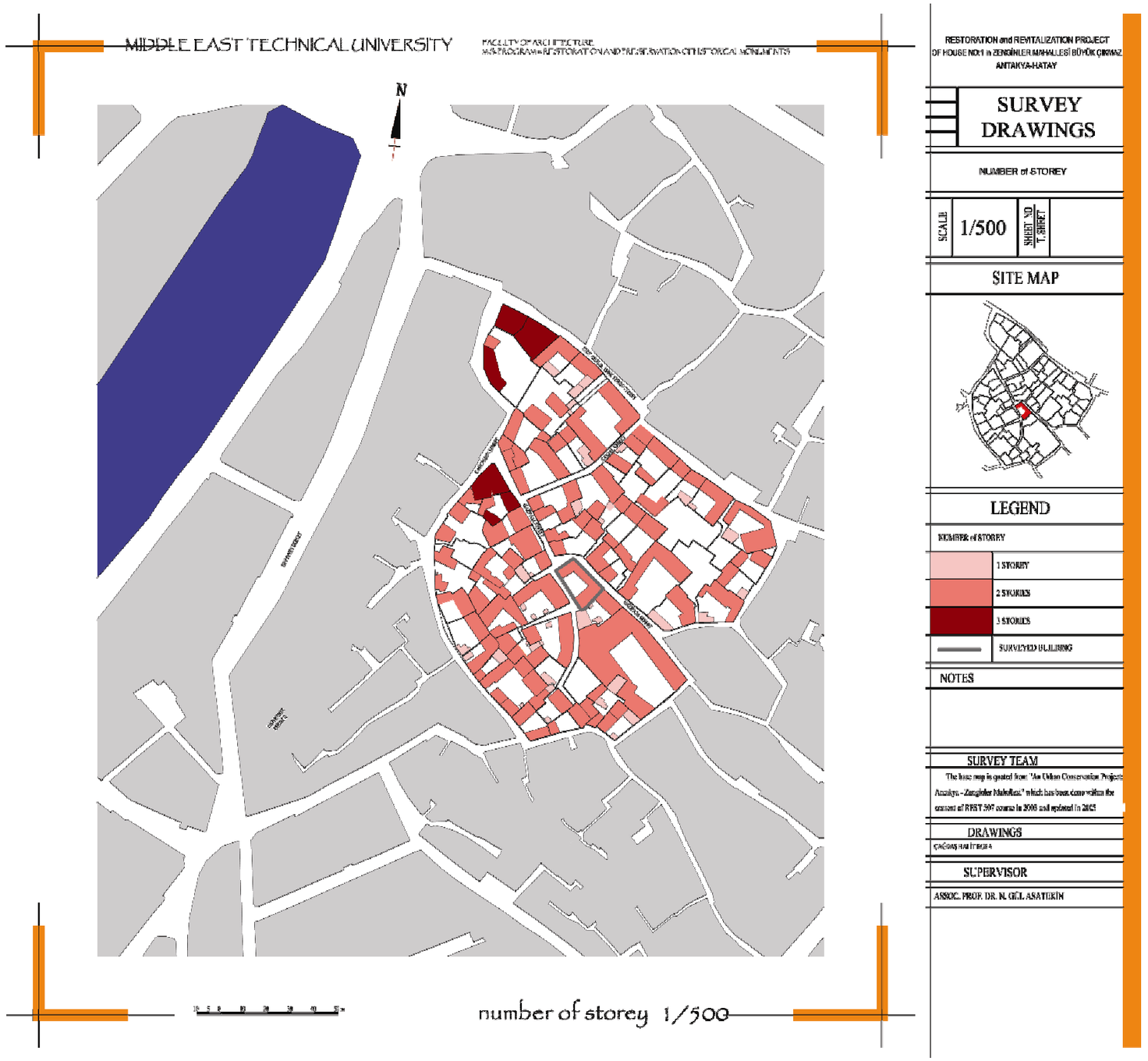


Illustration 3: Number of Storey of the Buildings in Nearby Environment

2.3. VERBAL DOCUMENTATION OF THE PRESENT STATE OF THE BUILDING

2.3.1. GENERAL DESCRIPTION OF THE BUILDING

The building is located at the north-west edge of the building block. The outer walls of the building define the borders of its own lot at three faces by touching the surrounding streets. From the south-east, outer wall is adjacent to building in neighbourhood.

If the maps of the city prepared by French in 1929 are taken into account, it has no difference with its relation to its lot since that time. There are three masses around a courtyard and it is enclosed with a remarkably high courtyard wall from one direction.

All of these masses are composed of two storied buildings. Ünlü Street is passing through the north-west and north-east façades. Büyük Çıkmaz Street is at south-west and the entrance is directly from this street. It can be said that the building was settled on a junction point.

The circulation is from street to courtyard and from courtyard to spaces which open directly to the outside. There are two stone stairs – one from the east and one from the west - which lead to first floor. In addition to this, it is possible to go upstairs by using a timber staircase which called as “mabeyn” in the cupboard in-between two rooms.

The north-west mass has three spaces (GF06, GF07, GF08) at ground floor and two larger rooms (FF06, FF07) on top. These rooms have a projection to Ünlü Street from the west.

The south-east mass has two rooms (GF01, GF02) at ground floor and two rooms (FF01, FF02) at first floor. In addition, there is another space called as

“mabeyn” located in between the rooms at ground floor. It is either for the horizontal circulation or vertical via ladder-like staircase.

There are three small spaces (GF03, GF04, GF05) at ground floor of north-east mass, one of them is in the middle and the side spaces which opens to it. At the first floor, there are three separations (FF03, FF04, and FF05). The circulation among these separations is one from the other. Two of them were jerry-built closed from courtyard side and one of them is semi open.

The courtyard facades of the building are of cut stones at the ground floor and timber skeletal at the first. It can be seen that the ground floor and some parts of the first floor of the north façade is of rough-cut stone and the other parts are timber. At the east, ground floor has rough-cut stones, first floor is timber skeletal. The whole south façade and the west wall which is used also by the neighbour building are of completely rough cut stone.

The traces of earthquake occurred in the past years and the partial repairs can be observed easily. Nowadays, it is unhealthy to live in because of its structural problems and bad-cared situation. The timber roof and its tiles, the decayed timber floor coverings of the first floor and the load on it, the broken buttresses which carry the projections of the first floor and the wide cracks on the stone surfaces especially on the top of the openings are dangerous.

2.3.2. FAÇADES

2.3.2.1. STREET FAÇADES

2.3.2.1.1. SOUTH-WEST (ENTRANCE) FAÇADE

The entrance door of the building is on south-west façade of the building. The total length of the façade is 19.50m on the ground. From the projection at the north-west side to the south-east edge, it is almost 20.90m long.

Figure 2: South-West Façade (author April, 2003)

The highest point of the façade is +7.50m level from the ground level at the north-west mass and +8.16m level at the south-east mass. The height of the courtyard wall is irregular owing to partial collapses and repairs. The highest level of the courtyard wall is +4.22m from the ground level and the lowest level is 2.69m from the ground at the right side of the entrance wall.

The vast majority of the courtyard wall was composed of rubble stone. Baked-brick part had been done at the right side of the entrance door. However, the rubble stone surfaces were plastered with cement plaster in a major portion at the right side and the left parts which is closer to the courtyard wall. In between the north-west mass and the entrance door, there was a wide lime plastered area. The entire courtyard wall was built by lime mortar jointing.

The opening of the courtyard door (DMW-2nL) was defined by using fine cut stone blocks. Both two sides of the opening, there are two pillars which have

four fine cut stone pieces seem like a column shaft and carved stones at top and bottom which seem like column capital and base. There is a fine cut stone lintel on the top of the opening. The finishing is of again carved stone blocks but unfortunately there were only small remains existing. The street face of the timber entrance door has been covered with zinc and the inner face which looks up the courtyard has been naked. The original door latch and shackle are still on the timber door.

The south-east mass of the façade is of rubble stone whereas the area in between the window openings is of baked-brick. However, the window openings have been defined by using fine cut stone blocks. The left corner of the first floor and left corner of the ground floor above the +1.62m level[4] from the datum line are of fine cut stone. The sills of the windows are composed of carved stone blocks. Moreover, the sill of the top left window extended to the left side almost 1.18m as a capping element on the courtyard wall. The entire façade is of lime mortar jointing. The rubble stone surfaces were plastered with lime plaster. But especially on the ground floor surfaces, there is a material lost problem.

The eaves of this mass project almost 90cm from the roof and they are 6.79m high from the ground level. As can be seen that the material loss problem at the edges of the eaves. Another drawback, traditional roof tiles were removed and a tin panel placed on the right side of the roof instead of tiles.

The window openings at the ground floor of this part have iron balustrades. Timber windows do not exist but the timber frames of the windows are still on the openings. There were other frames at the outer corners of the openings used for the shutters but those are the only remains. At the first floors, two wings of the shutter are still on the window at the left side. But the other one has no shutter except the frames. The one which has the shutter wings also

[4] Height levels are given in reference to 0.00 level (datum line) unless there is another information.

has window wings inside. At the right side, there are only timber frames of the window.

The north-west mass of the façade is of rubble stone at the ground and timber skeletal at the first floor. Corner finishing at the left side is of cut and fine cut stone blocks. Lime mortar is used as binding material. Some parts of the timber frame are wood-lath and the others are rubble stone infill with lime mortar. Almost the whole face of the first floor is lime plastered. There is a small lime washed area at the right top. On the other hand, there are only some partial remains at the ground floor. Closer to the ground level, there are some cement plasters.

There are two holes which expand to fire place at +0.66m level and 1.26m far from the left corner. There is a timber buttress which carries the projection of the north-west mass composed of two timber components at +1.17m and 1.41m levels.

The eaves project 90cm from the roof on the three main ridgepoles at three different points. The rafters have been naked at the right side because of material lost of traditional roof tiles.

There are two timber shuttered windows at the left side of the first floor. Either window has four wings so have the shutters.

2.3.2.1.2. NORTH-EAST FAÇADE

The total length of the façade is 18.65m long on the ground. It is 19.76m with projection at first floor. Three masses give face to this façade. The highest point of the roof of the left hand side is +6.54m level, +5.12 at the mass in the middle and +5.90m level at right hand side.

The vast majority of the north-east façade is of rubble stone. However, similar with the south-west façade, the corner finishing and surroundings of the

openings are made of cut and fine cut stone blocks. At the left corner of the façade, right behind the projection, the stone wall has been combined with almost 45 degrees about 42cm long fine cut stones. From -0.10cm level to +0.03cm level, this surface has been attached the corner with a curvilinear carved stone block.

Figure 3: North-east Façade (author April, 2003)

On the surfaces of south-east mass, there are partial remains of lime plaster especially closer parts to the neighbour building and surroundings of the openings. Likewise, another area which has lime plaster remains is the closer parts of projection. It extends about 2.79m long from top to bottom and 0.55m wide. There are two separate cement plastered area on the surfaces of the junction points of the mass in the middle and north-west mass. These two masses not only have lime mortar binding material but also xxx jointing whereas the south-east mass has lime mortar binding.

There are two windows (WTSH-4R) 2.00X1.10m in dimension on the south-east mass and two smaller (WTSH-4R) on the middle mass. All of these

openings have been defined by using fine cut stone blocks. The sills of them are of carved stones. On the other hand, there are two openings (WTSH-2R) on the first floor wall of the south-east mass which have been defined by baked brick and timber lintels. These two have shutters. The shutters (SSR-2F) composed of two simple timber panels. Four windows on the ground floor wall have only timber frames which have been fixed on the fine cut stone frames of the openings and hinges of the shutters. All these four have also iron balusters. There is another four winged window (WTS-R) on the projection. This window also has shutter but two wings of the shutter do not exist.

The plastered surface which might be on the wood laths of the projection has been lost. There is a buttress which caries the projection at +1.41m level. It has two components. The one at the top is of timber and the length is 1.10m. The other is at the bottom of the timber buttress and made of carved stone. It projects 0.44m from the stone wall.

The eaves project 90cm from the roof. Like the south-east façade, the roof cover has been lost at the edges of the eaves.

2.3.2.1.3. NORTH-WEST FAÇADE

The total length of the façade is 8.90m long. The level of eaves is +4.40m at the left and +4.35 at the right. The highest point of the roof is +5,89m level.

The ground floor of the façade is stone masonry and the first floor is timber skeletal. The corners of the ground floor and the buttresses which carry the first floor are of fine cut stone blocks. In addition, there is an opening on the surface of this floor and it is also defined by using fine cut stone. Right after the cut stones of the corner, it can be seen that a transition zone - almost 1m wide - made by cut stones. The mid parts of the masonry consist of rubble stone.

Lime mortar is the binding material in between the stones. The upper parts of the ground floor surface are mud plastered. Under 1.5m level from the ground,

there is not any plaster except a small cement plastered area at the left bottom. There is a timber beam at the left hand side of the window (WTSH-2R) which is 1.4m long at -0.33m level.

Timber skeletal first floor is lime plastered but almost the half of the plasters has been lost. At those parts, the wood-laths can easily be seen. The left hand side of the first floor - from the second window to the left corner – has rubble stone infill with lime mortar binding. There is a flue 2.70m far from the right side at 4.40m level. Each window has a timber framing piece which is located almost 30cm below and these framings are 35cm long.

Figure 4: North-west Façade (author April, 2003)

The eaves project 90 cm from the roof. Like the other parts of the roof, the facial boards at edges of the eaves stand back. The roof tiles have been lost at those parts.

There is an opening on the surface of the ground floor which is located in the middle of the façade. It is 1.50mX0.75m in dimension and 1.20m high from the ground. It has two winged solid timber shutter (SSR-2F) and grid iron baluster. There is a window (WTSH-2R) at the inner side of the opening.

There are seven windows on the first floor. Four of them are sash windows (WTS-R) and they are located at the left hand side of the façade. Other three at the right side are four winged windows (WTSH-4R). The sash windows and the four winged windows are the openings of two separate spaces. The hinges on the frames indicates that all of the windows have four winged shutters. Today, only the first, third and fourth windows from the left side have two shutter (SLR-1S2F) wings at the top and the first window of the right side has two shutter (SLR-4F) wings at the bottom.

2.3.2.2. COURTYARD FAÇADES

2.3.2.2.1. NORTH-WEST FAÇADE

North-west façade of the courtyard is 5.84m long. The level of the eaves is +4.04m and the highest point of the roof is +5.79m level.

Figure 5: North-west Façade of the Courtyard (author April, 2003)

The façade is stone masonry at ground floor and timber skeletal at upper floor. The whole stone masonry is of fine cut stone. The upper floor's circulation corridor fits on two cut stone buttresses which project from ground floor. These two buttresses also have timber components on the top and they project 33cm more than the cut stones. There are three doors (DTF-2nL, DTF-1nL, DTF-1LO), two windows and five top windows (on the top of the openings called as "fanus takası". All of the doors are ached and two of them (DTF-1nL, DTF-1LO) which are located at the left hand side have one wing solid timber wing. The other one (DTF-2nL) at the right side is two winged solid timber. Although the openings are arc shaped, the wings of the doors are rectangular. Two windows on the façade have only shutters (SSA-2F) and they are rectangular two winged solid timber. The openings of the windows are also arched at the top.

There is a one flight stone stair which leads to first floor of this façade. The width of the stair is 90cm and it has sixteen fine cut stone block steps. Seven steps of the stair sit on a fine cut stone wall and they are rectangular. Other nine steps project from the courtyard wall and they are profiled from the bottom. An iron balustrade extends at right side of the stair from first step to last.

As mentioned above, there is a semi-open circulation space which gives face to this façade at first floor. It is 130cm wide. There are five timber posts at the edge of the space and two of the posts sit on the buttresses. Others are located at the right side of the stair, at the left side of the stair on the courtyard wall and at the corner which combines two masses of the building. All those posts carry the roof at that part and they have combined with a purlin at the top. There is a timber balustrade between each timber post and it is 90cm high. There are three windows (WTS-R) and two doors (DTF-1LF) which open out to this façade on the surface of the FF06 and FF07 spaces' outer walls. Both two doors are one winged solid timber and all of the windows are sashes.

The eaves project 90 cm from the post. The roof tiles at the edges of the eaves again have been lost and facial boards fit almost 50cm back side of the edges of the rafter.

2.3.2.2.2. SOUTH-WEST FAÇADE

The south-west façade of the courtyard which is composed of courtyard wall is almost 10m in length. The highest points of the façade are +2.72m at right side and +2.58m at left. Partial collapses can be observed especially at the mid parts of the wall. At those parts, the height of wall decline +1.00m level.

There are two stairs which are located at both sides. One of them is one flight stone stair and the other one is “L” shaped double flight stone stair.

Figure 6: South-west Façade of the Courtyard (author April, 2003)

The triangular area under the one flight stone stair is of fine cut stone up to the plastered area which is 1.10m in width near the north-west mass. There is a carved stone washbasin at -0.98m level, a small niche (NSE-a) like a soap dish at -0.65m level and a bigger niche right above the wash basin at -0.35m level. The area of the courtyard wall above the stair is plastered. The height of the wall is variable at that part. It looks like that is has been stepped.

The “L” shaped double flight stairs fine cut stone steps are more detailed in comparison to the other stair steps. This stair is located at the left hand side of the façade and leads to first floor of south-east mass. Both two flights of the stair supported with jerry-built walls. Baked bricks, fine cut stone blocks, rough cut stones are used in the composition of the supporting walls. Some parts of the walls have been plastered with cement based material and binding material of the walls is also cement mortar. Above the stair, the courtyard wall is made of rubble stone. The height of the wall is again variable because of a partial collapse at right side near the entrance door of the courtyard. At that part, the wall is implemented by using brick. The brick wall is 60cm far from the door and almost 90cm in width. Various small parts of the wall are plastered. There is a concrete lintel on the top of the door opening.[5]

2.3.2.2.3. SOUTH-EAST FAÇADE

The total length of the façade is 8.62m from left edge to right. The highest point of the façade is +6.62m level on the top of the roof. The eave of the roof is at +5.10m level.

The ground floor surface of the façade is of fine cut stone and the upper floor is timber skeletal. The stone masonry of the ground floor ends with a fine cut profiled stone moulding at +1.98m level. There are two doors which access two different spaces located on the ground. The door which belongs to GF01 space has no wing. It is 0.95mX2.75m in dimension and it is rectangular. There are two profiled stone project almost 8cm towards inside of the opening at both top sides. A timber frame structure which looks like a frame of a door is fixed right around the opening. The other door (DTF-2LGF-a) is smaller than above mentioned and belongs to GF02 space. It is 0.90mX2.20m in dimension. The door is arched at the top. The arch is depressed like the other arches which are located at the top of the openings. Although the opening is arched, the two

[5] For more information about the entrance door of the courtyard, see section 3.3.2.1.1.

winged door is rectangular. The door wings are panelled up to middle and from middle to top it they are glazed.

Figure 7: South-east Façade of the Courtyard (author April, 2003)

There are three windows on the façade. One of them belongs to GF02 and the other two open out from GF01 to courtyard. Two windows (WTSH-4R) of GF01 space are 0.90mX1.80 in dimension. They have rectangular forms. There is no lintel on the top of these windows. Flat arches have been used to pass the opening instead of lintels. The one at the right side has a bearing failure and partially sagged. Both two windows have fine cut stone profiled sills and have four wings. However, the window at the right side has been lost its one wing which might be located at the left bottom. There is a cardboard that closes the two top wings of the same window. The arched opening of the GF02 has only two winged solid timber shutter (SSA-2F). In addition to this, there are three top windows which are called “kuş takası” at +1.10m level and one niche called as “fanus takası” at *o.33m level on the face of ground floor. There is a bush-hammered stone which is called “rozet” on the top of the “fanus takası” at +0.33m level.

The stone stair on this façade is double flight and has no balustrade. It has fifteen steps and one narrow landing that cover 0.72sqm area.

Like the north-west façade, there is a semi open circulation corridor at first floor. On the contrary, this corridor does not project from the façade, moreover goes 1.04m back. Another conspicuous feature of the corridor is that has a level difference. There is a step near the second door which opens out to “mabeyn” and it is almost 6.20m far away from the courtyard wall at the right side. The roof is supported with five timber posts which define the corridor from one direction. These posts has been combined each other by timber balustrade. The vertical elements of the balustrade are iron bars. Although some of them have been lost, the vast majority of them still exist. The posts are also combined with a timber post at the top. In addition, a timber element has been used at the bottom of the iron bars.

There are two doors and three windows which give face to this façade from the circulation corridor. FF01 space has one door and two window but none of them have wings. Another drawback, the door which opens out to “mabeyn” has no wing. They only have the door and window frames. The opening at the left hand side which belongs to FF02 space has a sash window (WTS-R).

The eaves project 90cm from the post. The roof tiles at the edges of the eaves have been lost at this façade, too. The facial boards fit almost 50cm back side of the edges of the rafters at the right side and the width shrinks up to 20cm at left hand side.

2.3.2.2.3. NORTH-EAST FAÇADE

The total length of the façade is 9.26m from the ground and 8.42m at the first floor. The highest point of the façade is +5.06m level on the top of the roof.

The façade is like divided into three at ground floor. There is a big door (DTF-2LGF-b) in the middle with a wood-lath arch on top of it and timber skeletal

walls on both sides. The upper floor is also timber skeletal. Under the timber skeletal walls of the ground floor spaces, there are two profiled fine cut stone element on the surface on both sides. The one at the right is 3.35m long and the other is 3.53m long. Both two long fine cut stones rise up to -1.05m level and this level is also the floor levels of the GF03 and GF05 spaces from inside. In addition, a fine cut stone doorsill has been done under the door which is located in the middle of the façade. The whole façade of the ground floor is lime plastered and lime-washed on plastered surface.

Figure 8: North-east Façade of the Courtyard (author April, 2003)

There are six windows and three of them are on GF03 space's wall and the other three is on GF05 space's wall. All of the windows are sash and they have the same feature. The first window at the left side has iron balusters which have been fixed horizontally. Some of the elements of the baluster have been lost and the others have leaned. The second window at the left side also has iron balusters. It is forged and inappropriate with the dimensions of the window. The

baluster is 0.67mx1.12m whereas the opening is 0.80mX1.70m in dimension. The third window (WTS-R) at the left side has been closed with chipboard pieces from the outside.

The door (DTF-2LGF-b) which is located in the middle of the façade is rectangular and has two wings. It is divided into four, first part is three panelled and the other three divisions are glazed on the upper parts. The height of the door is 2.10m and there is a glazed area which has been fixed in arch on the top of the door. This part has been closed from the outside with a blue canvas nailed on the surface by using timber pieces.

There are five timber posts which support the roof on the façade of the first floor. Indeed, this part is entirely semi open. However, the left edge of the façade has been closed with a jerry-built timber structure which is 3.30m long. The timber posts have been combined with timber balustrade and a timber purlin on the top of the posts.

The highest point of the eaves is +4.04m at the left hand side and +4.33m level at the right. They project 90cm from the post. The roof tiles at the edges of the eaves have been lost and the facial boards of the eaves fit almost 50cm back side of the edges of the rafters.

2.3.3. DESCRIPTION OF THE SPACES

2.3.3.1. PLANS

2.3.2.1.1. GROUND FLOOR PLAN

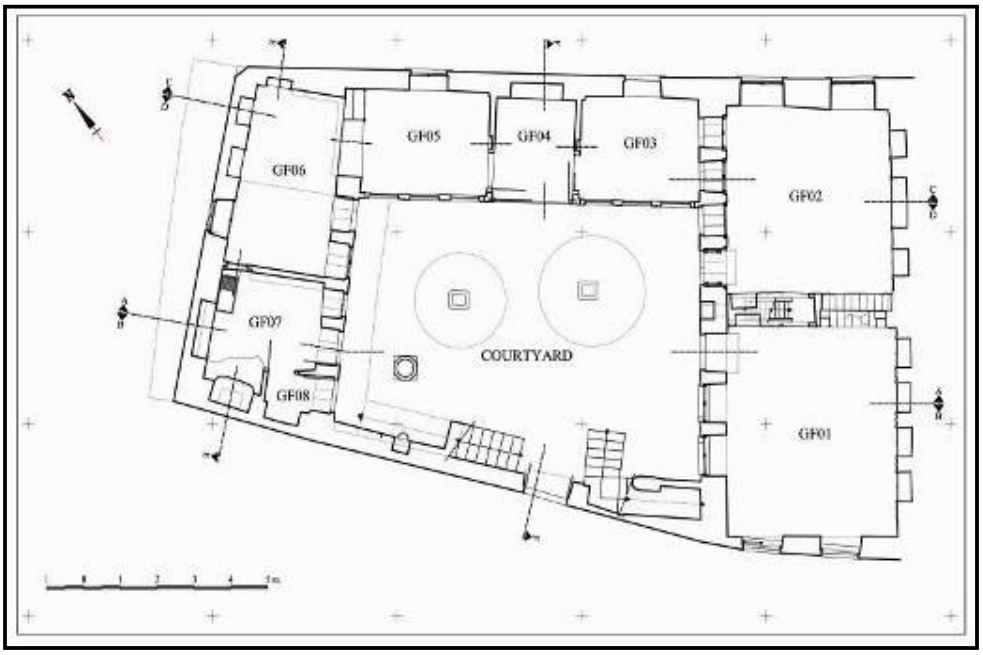


Illustration 4: Key Map of Space Codes of Ground Floor

The house has been arranged by three main masses which enclose a courtyard on three faces and a high courtyard wall from one side. The one and only entrance of the building is from the door located on this wall.

2.3.2.1.1.1. COURTYARD

The shape of the courtyard is trapezium as a reflection of the lot which the building has been sat on. The length of the courtyard wall part is 10.20m. The

boundaries of the north-west, north-east and the south-east masses are 6.07m, 9.20m and 7.12m respectively.

There are eight spaces which is located around this courtyard. The spaces of the north-west mass and south east mass have entrances directly from the courtyard. In addition to this, it is possible to pass from GF01 space to GF02 space with a special suite of rooms which is located on their party wall in the arrangement of the cupboards. On the other hand, GF08 space not only opens out to courtyard but also to GF07 space with a door. GF04 space of north-east mass opens out to courtyard but the other spaces – GF03 and GF05 - of the mass open out to this space only. Finally, there are two stone stairs which reach to upper floors of the north-west and south-east masses.

Figure 9: Courtyard (author April, 2003)

The floor covering of the courtyard is of cut stone. There is a well located near the entrance door of GF07 space and there are two trees in the middle of the courtyard. There are also a fountain and a washbasin on the courtyard wall underneath of the stair which goes to north-west mass' first floor.

The courtyard wall is stone masonry. However, baked brick masonry can be observed at some parts of it.

2.3.2.1.1.2. SPACE GF01

The space GF01 has a rectangular form which is 4.62m by 5.47m in dimension from one side to the other. The entrance is from the left hand side of the long wall which is adjacent to the courtyard.

There is a stone doorsill at the entrance. After that, an area defined by level difference which is called “seki altı” 1.00m by 0.90m in dimension. This part is covered with cut stone. The level difference is 13cm in height. The floor level of the room is 32cm higher than the floor level of the courtyard. The floor is of compacted soil except the area comes after the “seki altı” which is 1.28m by 1.66m in dimension. This part is also covered with cut stone which is similar with the covers of courtyard.

Figure 10: Space GF01 (author April, 2003)

There are two windows (WTSH-4R) on the wall which the entrance door is also located on. Both window openings and the opening of the door are arched. The surfaces are mud plastered and lime-washed.

The south-east wall of the space has two windows (WTSH-4R) which open out to street. These openings are also arched from inside. The surfaces of the wall are mud plastered and lime-washed.

The south west wall is also the other long wall of the space. It is adjacent to the neighbour building. There are four cupboards (NSE-b) on the façade of the wall which have been designed as a whole. The cupboards rise up to +1.38m level from the floor level. The length is 4.96m starting from the north-east corner to the end of the cupboards. The other parts of the wall are lime plastered and lime-washed.

The north-east wall of the space has been arranged as a whole like it is completely a surface that includes cupboards. The timber surface rises up to +1.05m level from the ground. The area over the timber part is lime plastered and lime-washed. There are three primary divisions on the timber surface of the façade. Two of them are cupboards (CFcCND-b) and the other one is a door indeed which provides a passing to “mabeyn”.

The ceiling has been spanned with a well-processed profiled timber beam which is placed in-between the middle of the short walls. There are secondary beams fitted at opposite direction in-between the primary beam and the walls. The span in-between the secondary beams is 20cm and there are timber ceiling covering boards on the secondary beams. They are 22cm in width.

2.3.2.1.1.3. SPACE GF02

The space GF02 is rectangular. The dimension of the space is 4.44m by 4.84m from one side to the other. The entrance of the space is from one of the long

wall which is adjacent to the courtyard. The entrance door (DTF-2LGF-a) is located at the right side of this wall.

There is a stone doorsill at the entrance. In front of the entrance, there is a “seki altı” 0.83m by 0.91m in dimension. The level difference is again 13cm with the floor of the room and it is covered by using cut stone covering elements. The floor level of the room is 24cm higher than the floor level of the courtyard. The floor covering is of mosaic tile. The tiles are in square form measured 20cm by 20cm and three types of tiles have been used. There is a frame outermost by single colour tiles. Then, there is a frame again consisting geometrically figured tiles. After those tiles, a frame designed by using figured tiles which have curvilinear forms. The inside of the last frame is made geometrically figured mosaic tiles.

Figure 11: Space GF02 (author April, 2003)

The north-west façade of the room has three windows (WTSH-2A) and the entrance door (DTF-2LGF-a). The window which is located next to door has only solid timber shutter (SSA-2F) and opens out to courtyard. On the other

hand, other two windows are glazed and have no shutter. These two open out to GF03 space. The entrance door and the windows have been organised like a strip with the timber frames. This strip is at -1.04m level and rises up to +0.94m level. There is a mosaic tile skirting 10cm in height. There are also two top windows called as “kuş takası” on the same surface right above the timber framed strip. Other surfaces of the wall are lime plastered and lime-washed.

The south-west wall of the space has been arranged alike the other side of the wall which belongs to GF01 space. There are three main divisions. Two of them are cupboards (CFcCND-a) and the other one located in the middle is a door (DTI-2nL) opens out to “mabeyn”. The other parts of the wall above the timber area are lime plastered and lime-washed.

The south-east wall of the room is adjacent to the building in neighbourhood. There are two cupboards (CS-b) symmetrically designed on the corners of the wall and a bigger one (CPH-a) right in the middle. The mosaic tile skirting extends from one corner to the other. The rest of the wall is lime plastered and lime-washed.

There are two windows (WTSH-4R) open out to Gazipaşa Street. The wall has been finished by a mosaic tile skirting and the other surfaces of the wall are lime plastered and lime-washed.

The ceiling is almost in the same characteristic with the GF01 space. The only difference is that the timber board frame used at the corner of the GF01 room has not been used on this ceiling. The whole ceiling has been covered with nylon.

2.3.2.1.1.4. SPACE GF03

The space GF03 is in a square form that measured 3.20m by 3.20m from one side to the other. The entrance door of the space is on north-west façade and it opens out to GF04 space.

The floor cover is made of topping coat (cement covering) and the level of the floor is 30cm higher than the level of courtyard.

The entrance door of the room is on the left edge of the north-west wall. There is a door wing which seems not to be original because its dimension, material and combination with the door frame. There is timber shelving (N-PD) next to door which includes four shelves. The shelving has been limited with two timber frames which extend from the door to the corner of the wall. The rest of the surface is lime plastered and lime-washed except the area below the timber frame. The lime plastered surface has been lost at this part.

Figure 12: Space GF03 (author April, 2003)

There are three windows (WTS-R) on the south-west façade of the space. The windows are like a strip in façade order. They are at -0.64m level at the bottom and rise up to +1.22m level at the top. The rest of the façade is of lime-wash on lime plastered surface.

The south-east wall is made of fine cut stone blocks. The entire surface has been lime plastered. There are two windows (WTSH-2A) which open out to GF02 space and two top windows closed from the back side.[6]

The north-east wall of the room has a window on it. The façade is lime plastered and lime washed.

The ceiling of the space is timber covered with laths. It has been covered with nylon.

2.3.2.1.1.5. SPACE GF04

The space GF04 is rectangular and 2.20m by 2.66m from one side to the other. The entrance door (DTF-2LGF-b) of the room is on south-west wall. It opens out to the courtyard.

The floor is of marble. It is decorated by using white and black marbles. The level of the floor is 6cm higher than the level of courtyard.

[6] All these informations indicate that the space GF03 has been designed in a later period. It is understood that once the south-east wall was a wall faced with courtyard and the top windows were “kuş takası”. They belonged to Sapace GF02.

Figure 13: Space GF04 (author April, 2003)

The south-west wall consists of the entrance door. The door has been fixed in an arched opening. The upper parts of the arch are lime plastered and lime-washed.

The south-east wall has entrance door of GF03 space on it. The lower parts of the wall up to -1.16m level are of fine cut stone with lime-wash. The rest of the façade is lime plastered and lime-washed.

There is a big arched niche (NSI) on the north-east façade. The bottom of the niches is at -0.48m level and rises up to +1.46m level which is the vertex point of the arch, as well. There is a profiled fine cut stone block below the niche and a shelf has been fixed approximately the mid part of the niche. The surface of the wall is lime plastered from the bottom of the niche to the ceiling. The lower parts are cement plastered. Except the surface of the profiled stone block, the lime-wash has been done on plastered surfaces.

The north-west wall of the space has the same properties with south-east wall. The door (DTI-1nL) on this façade opens out to GF05 space.

The ceiling of the room is timber covered with laths.

2.3.2.1.1.6. SPACE GF05

The space GF05 is rectangular and 3.40m by 2.70m in dimension. The entrance door (DTI-1nL) of the room is on the south-east wall which is the party wall with the space GF04, as well.

The floor of the room is of cement topping coat and the level of the floor is 30cm higher than the courtyard floor level.

Figure 14: Space GF05 (author April, 2003)

The south-east façade of the room is same as GF03 room's north-west wall. It consists of entrance door and a timber shelving (N-PD) which includes four shelves. The rest of the surface is lime plastered and lime-washed.

There is a window (WTSH-4R) on the north-east wall. The entire surface is cement plastered and lime-wash has been applied on the plastered surface.

The north-west wall of the space has a cupboard. It has one vertical partition which divides the cupboard into two. The part at the left hand side is almost three times bigger than the other one. The cupboard is 67cm higher from the ground and rises up to +1.14m level. The rest of the wall is cement plastered and lime-washed.

The south-west façade is organised same as GF03 room's courtyard wall. There are three windows (WTS-R) planned together as a whole in a timber frame. The upper and the lower parts of the wall is lime plastered and lime-washed.

The ceiling is again in the same characteristics with the GF03 space. It is timber covered with laths. The entire ceiling, the window at the left hand side and the narrow part of the cupboard has been covered with nylon.

2.3.2.1.1.7. SPACE GF06

It is a rectangular space located at the ground floor of the north-west mass of the building. The measure of the room is 2.66m by 4.70m from one side to the other. The entrance of the room is provided with a door (DTF-2nL) which opens out directly to the courtyard. It is located on the south-east wall of the space.

There is a door sill at the entrance and a small area like "seki altı" 53cm by 90cm in dimension. This part is 15cm lower than the floor of the room. The floor of the room is made of compacted soil. The level of the floor is 17cm higher than the floor level of the courtyard.

Figure 15: Space GF06 (author April, 2003)

Being different from the other spaces of the building, GF06 has a mezzanine floor which has been placed in-between the mid part of the room and north-east wall. The floor of the mezzanine is at +0.80m level and 2.56m by 2.66m in dimension. The mezzanine floor is carried by two timber beams located on the both sides and other secondary beams fixed on these two. The floor is of batten. There is a timber balustrade at open side of it.

The south-east façade of the space has the entrance door (DTF-2nL) and a window next to it. Furthermore, there are two top windows on both opening. There is a timber partition starting from the north-east wall which is 2.05m long. It is the back side of the cupboard located in the GF05 space. The bottom of the timber part is at -0.53m level and rises up to +0.94m level. The area between this level and ceiling is at 54cm forward of the surface. This part consists of wood-laths used for the plastering of GF05 space. There is a shelf at +0.18m level. The shelf is on timber partition. The rest of the wall is lime plastered and painted.

There is a cupboard (CS-a) on the north-east façade of the room. Its width is 98cm and has been placed from ground level to the floor level of the mezzanine. The shelf of the south-east wall continues on this façade by turning

from the corner. It ends at the boundary of the cupboard. Other parts of the wall have been lime plastered and lime-washed.

There are two cupboards (CS-a) and a window (WTSH-2R) on the north-west wall. Both two cupboards are 90cm in width. The window is two winged and 1.00m by 2.20m in dimension. The rest of the wall is lime-washed on lime plaster.

The south-west wall has an opening (SSR-2F) on it. It could be open up from the GF07 space. It is located at the right corner of the wall. From this opening till the end of the wall, the wall surface has been covered with linoleum. This part is like a horizontal strip that placed in-between the lower and upper levels of the opening. Except this area, the surface is lime plastered and lime washed.

The ceiling of the room consists of timber beams and the floor covering of the upper room.

2.3.2.1.1.8. SPACE GF07

The space GF07 is “L” shaped and it is 2.80m by 2.90m in dimensions at two long walls. The entrance (DTF-1nL) of the room is from the south-east wall.

There is a stone door sill under the door. The floor cover of the room is made of cut stone. However, a small area in front of the fire place has been covered with cement mortar. The level of the space is 7cm. higher than the courtyard.

There is a half story similar with the mezzanine of the GF06 space. It has been placed between north-east and south-west walls of the room. It has been supported by two timber beams span the room being parallel with north-west wall. The secondary beams have been placed on those primaries in opposite direction. The area covered by this half story is approximately the half of the room.

Figure 16: Space GF07 (author April, 2003)

The south-east façade of the room consists of two parts. One of them is in front and it has the entrance door (DTF-1nL) and a window on it. The one at rear is a solid wall which is also the back side of the GF08 space. Both two have "kuş takası" on top of them. The rest of the façade is lime plastered and painted.

The opening located on the north-east façade is half covered with a stable timber element and the bottom half consists of two solid timber wings open out to GF06 space. There is a shelf at +0.22m level. It has been placed in-between the left edge of the opening and the right corner of the wall. There is a kitchen sink adjacent from one side to this wall. The rest of the surface is lime plastered and painted.

The north-west façade of the room has a niche on it and it seems like for the ventilation. This arched niche is at -0.68m level and the key stone of the arch is at +0.17m level. The ceramic kitchen sink which is supported by two solid legs is also placed on this façade. The entire surface is lime plastered and painted whereas some small cement plaster repairs exist.

The fireplace is located on the south-west wall of the wall. It can be said that the wall consists of two faces, as well. The one in front with fire place and the other one has a door opens out to GF08 space. The fireplace is arched top with a plastered hood fume-like element. It is located at -0.36m level. The rest of the façade is plastered and painted.

The ceiling of the space consists of timber beams and the floor covering of the upper room.

2.3.2.1.1.9. SPACE GF08

The space measures 1.00m by 130m at two opposite sections. It seems like a division in GF07 space. The entrance (DTF-1LO) is at courtyard side and also another one from GF07. It has been used as a toilet.

The floor cover of the space is of topping coat and there is a ceramic squat toilet stone in the middle. The level of the floor is 22cm higher than the courtyard.

Figure 17: Space GF08 (author April, 2003) (author April, 2003)

There are two entrance doors on south-east and north-east walls. In addition, there is a top window above the door opens out to courtyard. The other parts of the all four walls of the room are cement plastered and lime-washed. Another thing should be told about the room is that the south-west wall indented inside. It would be wise to think about a niche was exist on the wall for further phases of the study.

The ceiling is covered by rough cut timber pieces at +0.70m level.

2.3.2.1.2. FIRST FLOOR PLAN

The first floor has been arranged as a reflection of ground floor around the courtyard. The circulation among the spaces is provided by two circulation corridors placed at courtyard sides of south-east and north-west masses.

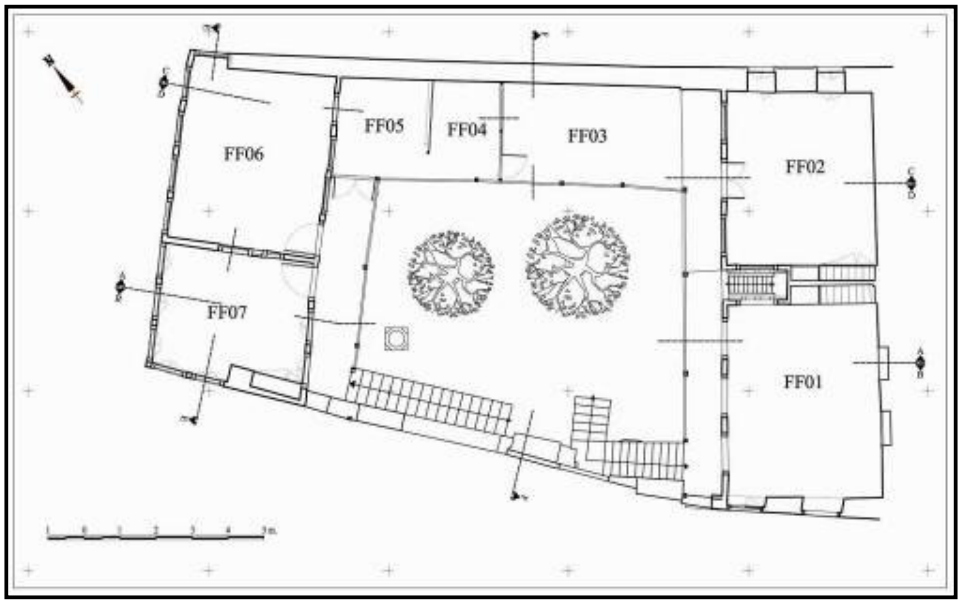


Illustration 5: Key Map of Space Codes of First Floor

2.3.2.1.2.1. CIRCULATION SPACES

There are two semi-open circulation spaces on two masses of the building. One of them is at the north-west side which can be reached by the one flight stone stair at the courtyard and the other is at the south-east mass which can be reached by the two flight stone stair. Both two spaces rectangular like corridors and provide circulation among the spaces and the masses.

At the north-west mass, the circulation corridor measures 1.30m in width and 6.10m in length. The stair is at the left corner and the other edge is provide an entrance to north-east mass.

Figure 18: Circulation Space at North-west mass (author April, 2003)

The floor is covered with timber floorboard placed in lengthwise in cross section direction. The floor level is at +1.84m level.

The south-east side of the space is open. The posts which carry the roof are at that side and they have been combined with timber balustrades.

There is a door consists of two solid timber wings at north-east face. It reaches to FF05 space. The height of the door is 1.90m and the area above the door has been closed with timber boards.

There are there windows (WTS-R) which have the same features at north-west façade. All of them are sashes. One of them belongs to FF06 space and the other two belong to FF07 space. One of the doors (DTF-1LF) placed on this façade opens out to FF07 and the other one to FF06 space. There is also a wash basin placed at this façade. The rest of the wall has been lime plastered and lime washed.

The south west wall is semi open. The courtyard wall rises up to +3.03m level at that side. The surface of the wall is naked and the binding material of the rubble stones is cement mortar.

There is no cover on the ceiling. The rafters and the roof boards are uncovered.

At the south-east mass, the circulation corridor is 1.10m by 11.26m in dimension. The space can be reached from the stair at the right side. At the left, it is combined with FF03 space and it extends in this room up to north-east elevation of the building.

The floor cover is of mosaic tiles. There is a raw consisting single colour tiles and the others are figured mosaic tiles. The floor has been divided into two and has a level difference as one step. The level of the floor at stair side is +1.97m and 2.11m at left hand side. The step is of fine cut stone but a half of it has been lost. A timber piece has been used instead of this lost element.

Figure 19: Circulation Space at South-east mass (author April, 2003)

The north-west façade of the space is semi-open. There are timber posts which carry the roof structure and they combined with timber balustrades with iron bars.

The south-west façade consists of courtyard wall. However, the fine cut stone elements of the south-west elevation of the building project 27cm at this face. The courtyard wall rises up to +2.58m level and finishing is made of fine cut stone capping. The face of the brick work of the wall is naked. The façade is open above this wall.

The south-east wall has four windows and there doors. Two of the windows belong to FF01 and the other two (WTS-R) opens out to FF02. The windows of FF01 have only the frames. On the other hand, FF01 space's have sash windows. The doors open out to FF01, FF02 spaces (DTF-2LGF-a) and "mabeyn" which goes to downstairs. None of them have wing. The rest of the wall is lime plastered and lime-washed.

The north-east façade of the circulation corridor is solid and lime-washed on lime plaster.

The ceiling has been covered with timber battens up to timber posts. After the posts, the ceiling is naked.

2.3.2.1.2.2. SPACE FF01

The FF01 space is rectangular and it is 4.15m by 5.40m from one side to the other. It is on the top of the GF01 space. The entrance of the room is from the middle of the north-west wall.

There is a timber door sill at the entrance and the floor is made of floorboards. The floor is at +1.90m level.

The north-east wall has the entrance door and two windows open out circulation corridor. It finishes at +5.27m level with a profiled timber cornice. The rest of the wall is lime plastered and lime-washed. The plaster has been lost at some parts and the wood-laths have come out.

Figure 20: Space FF01 (author April, 2003)

There are two windows (WTSH-4R) on the south-west façade of the room. They have been placed at +2.60m level from the bottom and rise up to +4.50m level at the top. The thickness of the wall increases to 16cm below the windows whereas the other parts are more or less 45cm. Most of the wing has been lost but is still can be easily understood that they are four winged windows. The façade finishing is of timber cornice at +5.27m level and the entire surface is lime-washed on lime plaster.

There are two cupboards (CS-c) on the south-east wall. They are in–between +2.66 and +4.12m levels. The doors of the cupboards do not exist. The timber cornice has been lost at this face but the trace still exists. The rest of the surface has been lime plastered and lime-washed.

The north-west façade of the room has a window and a cupboard (C-N) which has two partitions. The window only has the window frame. The top and bottom levels of these elements are the same. Those levels are +2.56m and +4.52m respectively. The doors of the cupboard do not exist, so does the timber cornice as a finishing material. The rest of the wall has been lime plastered and lime-washed. There is a small area where the plastered surface has been lost below the cupboard at the left corner. The wood-laths of the wall can be seen at that part.

Unfortunately, the entire ceiling cover has been lost but some small traces.

2.3.2.1.2.3. SPACE FF02

The room is rectangular and it is 4.10m by 4.80m from one side to the other. It is located on the top of the GF02 space. The entrance of the room is from the north-west façade.

The floor cover of the space is timber boards nailed onto beams. The level is at +2.02m level and a timber door sill has been placed at the entrance.

There are two windows (WTS-R) and a door (DTF-2LGF-a) on the north-west façade which open out to circulation corridor. The door is in the middle and the sash windows on both sides. There is a timber cornice as a finishing element for the wall at +5.35m level. The rest of the wall is lime-washed on lime plastered surface.

The south-west façade has been organised like a mirror of neighbour wall of space FF01. The cupboard (CPV) at the left corner has the door which includes three wings. The timber cornice does not exist but the supporting beam of it still at its place. The surface is lime-washed on lime plaster.

The south-east façade is blind wall which has been lime-washed on lime plaster surface.

Figure 21: Space FF02 (author April, 2003)

There are two windows (WTSH-2R) on the north-east façade. They have been located at a higher point from the eye level. The bottom of them is at +3.44m level and the top is at +4.80m level. Both two are two winged but the one at the

left hand side has lost its left wing. The timber cornice finishing does still exist at +5.35m level. They are solid timber shuttered (SSR-2F) from the outside. The rest of the surface is lime plastered and lime-washed. The entire ceiling cover has been lost but some small traces.

2.3.2.1.2.4. SPACE FF03

It is a rectangular space and measured 2.80m by 4.90m from one side to the other. The space is semi-open and has been created by dividing a bigger space into three.

The floor of the space is made of timber floorboards. The level of the floor is +1.71m and it can be reached from north-west with a door or south-east as an extension of circulation corridor.

Figure 22: Space FF03 (author April, 2003)

The south-east part is fully open. The circulation corridor is separated from this space by a step and a ogee arch built by using wood-laths. It is 25cm lower than the circulation.

The north-east façade consists of a lime-washed blind wall. The lime-wash has been applied on lime plastered surfaces.

There is a jerry-built timber partition element at the north-west side. Inside the partition, there is a door opens out to FF04 space.

The south-west façade is semi open. There are three timber posts which have been combined with a timber purlin at the top and timber balustrades at the bottom. They carry the roof.

The rafters of the roof and the roof board can be seen from the floor. There is not any special kind of cover for the ceiling.

2.3.2.1.2.5. SPACE FF04

It is one of the smallest spaces of the building that has been measured 1.86m by 2.74m at its sides of rectangular form. It can be reached form north-west and south-east sides.

Figure 23: Space FF04 (author April, 2003)

The floor level is at +1.80m and it is made of timber floorboards. The south-east façade consists of timber partition which breaks the FF03 and this space. There is a door on this face. The north-east façade is lime-washed blind wall. At the north-west, another timber partition panel can be seen. It is 2.04m long and 1.95m high. Unlike the other partition, it does not rise up to roof and has no door. The south-west face is open. There is a timber post and the timber balustrades on this side.

At the top, a collar beam which has supported the roof structure spans the room from north-east to south-west side. From south-east side to collar beam, the ceiling is uncovered. The rest of the ceiling is covered with canvas nailed onto rafters with thin timber frames.

2.3.2.1.2.6. SPACE FF05

The FF05 space is almost in a square for 2.60m by 2.70m in dimension. It can be reached from two ways.

The floor is of timber floorboards. It is at +1.80m level. The timber partition panel which has defined the south-east façade has a jerry-built shelf. The north-east façade is blind wall and lime-washed on lime plaster surface. There are two windows at the north-west façade and they belong to FF06 space. The rest of the surface is lime plastered and lime-washed. The entrance door is on the south-west façade's right corner. The door is mentioned while the circulation corridor of north-west façade has been described. The rest of the façade is open up to this door. The timber balustrade ends with a post where the door has been fixed. It carries the roof, as well.

Figure 24: Space FF05 (author April, 2003)

The ceiling of the space is covered with canvas nailed onto rafters with thin timber frames.

2.3.2.1.2.7. SPACE FF06

It is one of the largest spaces of the building. The dimension of the space is 4.11m by 5.10m at north-west and north-east walls. The entrance (DTF-1LF) of the room is on the south-east façade.

The floor is of timber floorboards. It is at 1.74m level. The level increases towards the north-west wall up to1.64m level. There are two holes on the floor because of a probable decay of the material.

The south-east façade has three windows (WTS-R) and a door (DTF-1LF) opens out to circulation corridor from the right corner. All of the windows are sash. The one at the left hand side has lost its sashes and the one in the middle has only one part of the sash. The profiled timber cornice which is a transition element between the wall and the ceiling has been recessed in plaster work. Its

level is at +4.40m. The rest of the wall is lime-washed on lime plastered surface.

Figure 25: Space FF06 (author April, 2003)

Both construction techniques – the stone masonry and the timber skeletal - can be observed on the north-east façade. The façade is blind wall – stone masonry – up to the window placed in timber skeletal wall at the left corner. It is a sash window (WTS-R) and has shutters at outside. The rest of the wall is lime plastered and lime washed. There is a small area which has lost its plastered surface. At this part, the wood-laths can easily be seen.

It can be said that the north-west façade is one of the most deformed faces of the building. There are four shuttered (SLR-1S2F) sash windows (WTS-R) on this surface. The timber cornice is at +4.55m level at the left top and the level increases to +4.35m at right hand side. The plasters have been lost and wood-laths are out at the right corner. The rest of the surface is lime plastered and lime-washed.

A window (WTS-R) which has been designed integrated with a niche (N-PW) has been placed on the south-west wall. It opens out to FF07 space. The niche consists of five shelves. Yet, these elements framed with timber frames towards the left corner of the façade. This frame has been organised by considering the

entrance door on the corner of next surface such as if the door is open it seems like a door on this façade. The finishing of the wall has been done with timber cornice and the rest of the plastered surface is lime-washed.

The cover of the ceiling has been lost except some small traces at the corners. There is a roughly shaped log right on the timber cornices. It spans the room from north-west to south-east and the roof structure can be seen from the floor.

2.3.2.1.2.8. SPACE FF07

It is a rectangular space that has been measured 3.35m by 4.08m from one side to the other. The entrance (DTF-1LF) of the room is on the left corner of the south-east façade.

Figure 26: Space FF07 (author April, 2003)

The floor is of floorboards and it is at +1.87m level. There is a timber doorsill under the entrance.

There are two windows (WTS-R) open out to circulation corridor with the entrance door (DTF-1LF). They have four wings. The rest of the surface is lime plastered and lime washed although some small parts which has lost its plaster. The rubble stone with mortar infill is out.

The north-east façade is organised as a mirror of opposite side of the wall. But unlike the south-west façade of the FF06 space, the niche (N-PW) has been shifted towards the door's frame because of the thickness of the timber skeletal wall. The façade is lime-washed on lime plastered surface.

There are three windows (WTSH-4R) on the surface of north-west façade. All of them has four wings and timber shutters (SLR-4F) at outside. The rest of the wall has been lime plastered and lime washed.

Two windows (WTSH-4R) and a cupboard (CPH-b) have been placed on the south-west façade. The windows have the same feature with the others located on the north-west. The wall is stone masonry up to first window and the rest is timber skeletal. The cupboard has been placed in the stone masonry but because of its width it has been closed with a timber skeletal structure from the outside. The door of the cupboard consists of three wings hinged from one side. There are three shelves on it but the one at the bottom has lost its door. The rest of the surface is lime plastered and lime washed.

The entire ceiling has been covered with nylon. But even so, it can be seen that it is panelled ceiling (tekne tavan). The curved parts are of lime plastered and lime-washed wood-laths, and the rest is timber. There is a "göbek" in the middle of the ceiling which is made of carved timber.

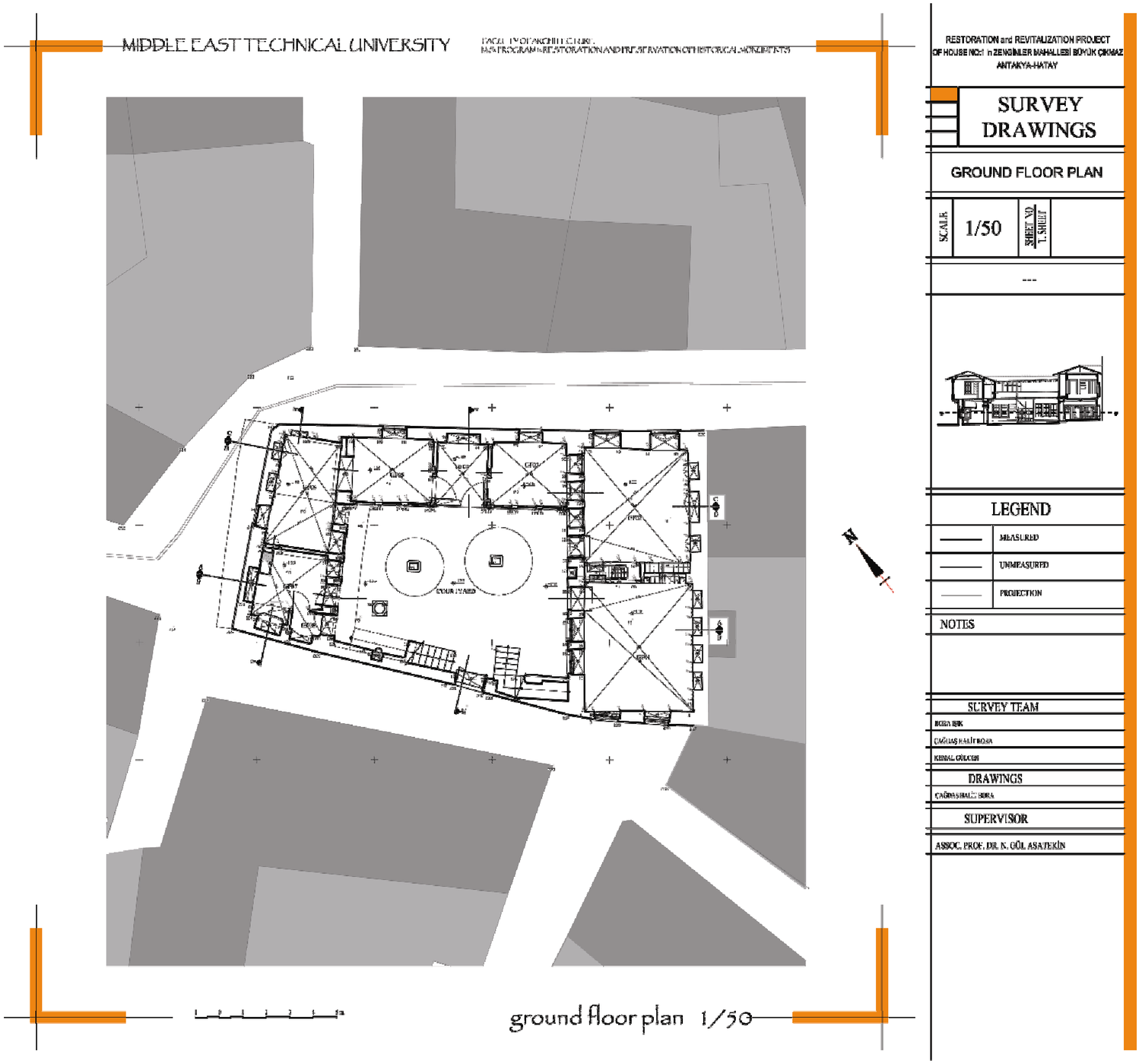


Illustration 6: Survey Drawings – Ground Flor Plan

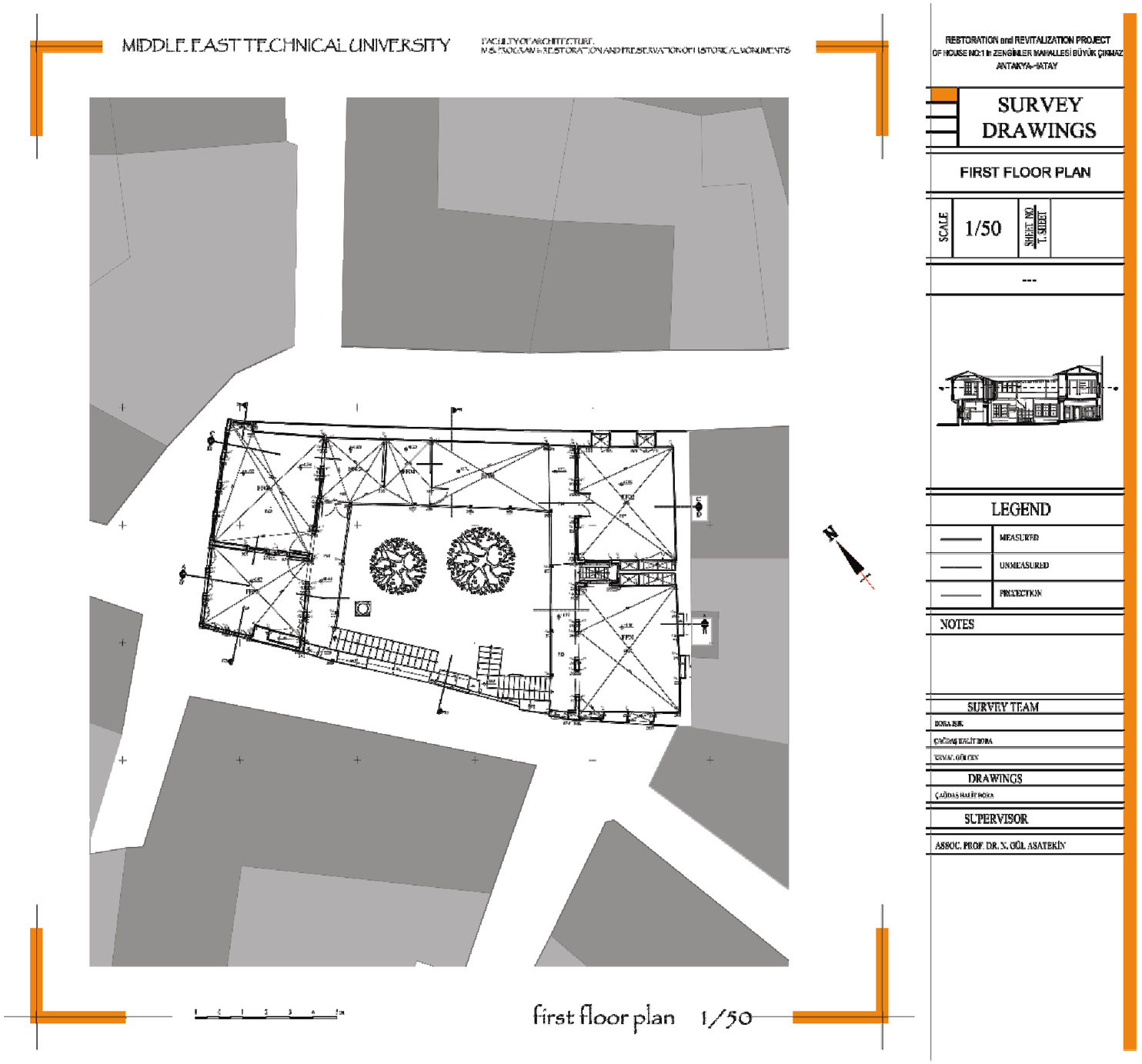


Illustration 7: Survey Drawings – First Flor Plan

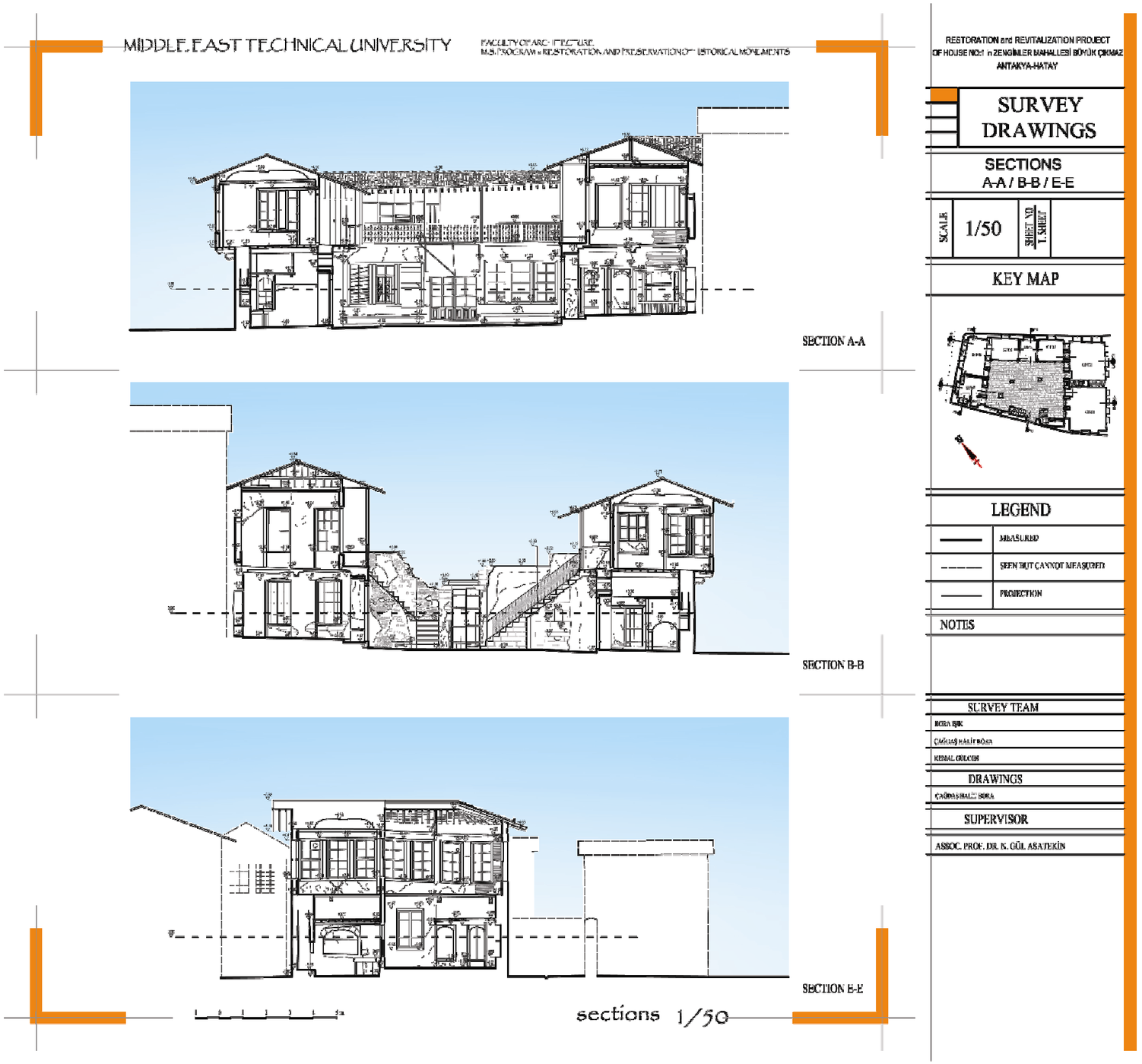


Illustration 8: Survey Drawings – Sections 1

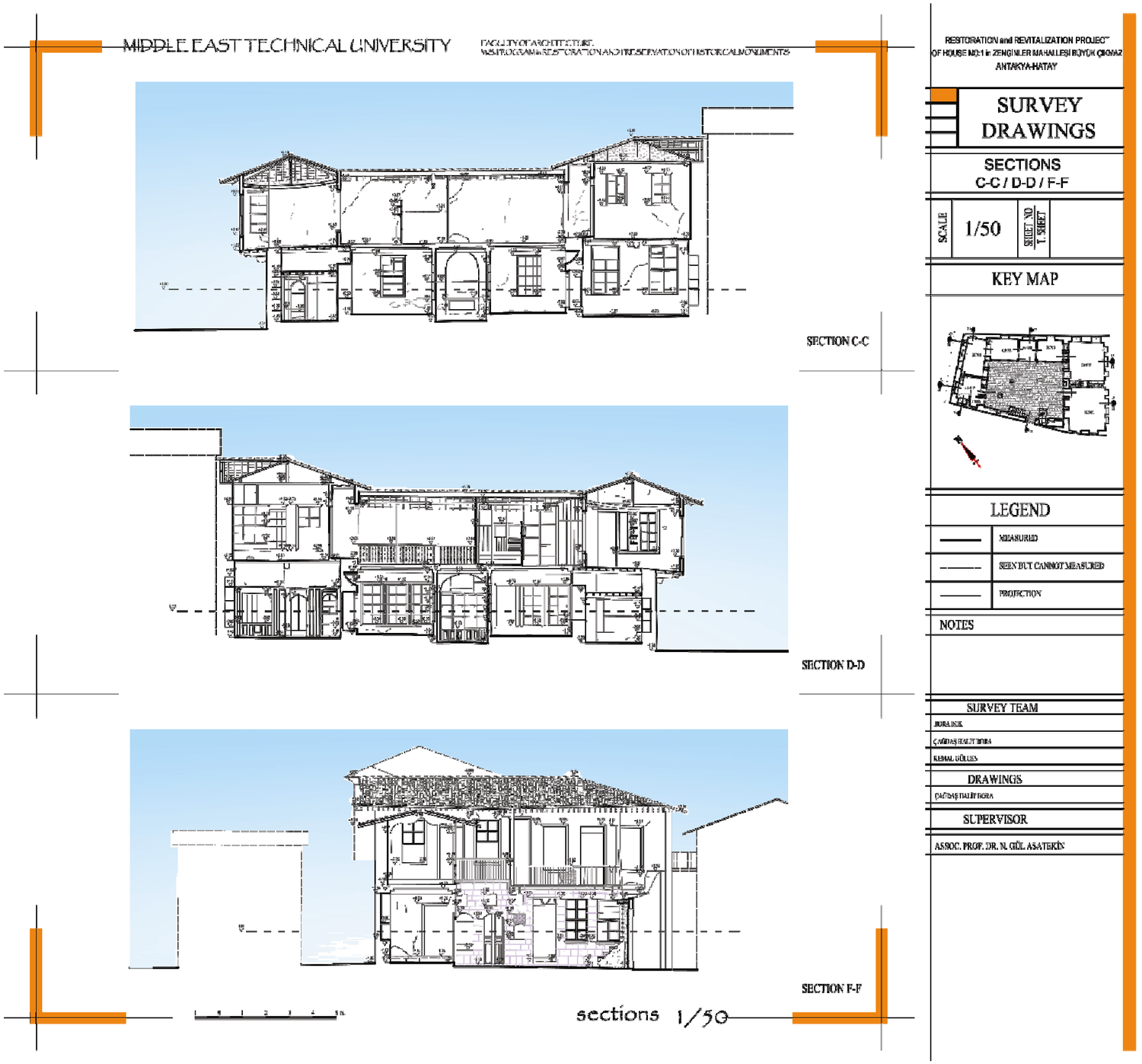


Illustration 9: Survey Drawings – Sections 2

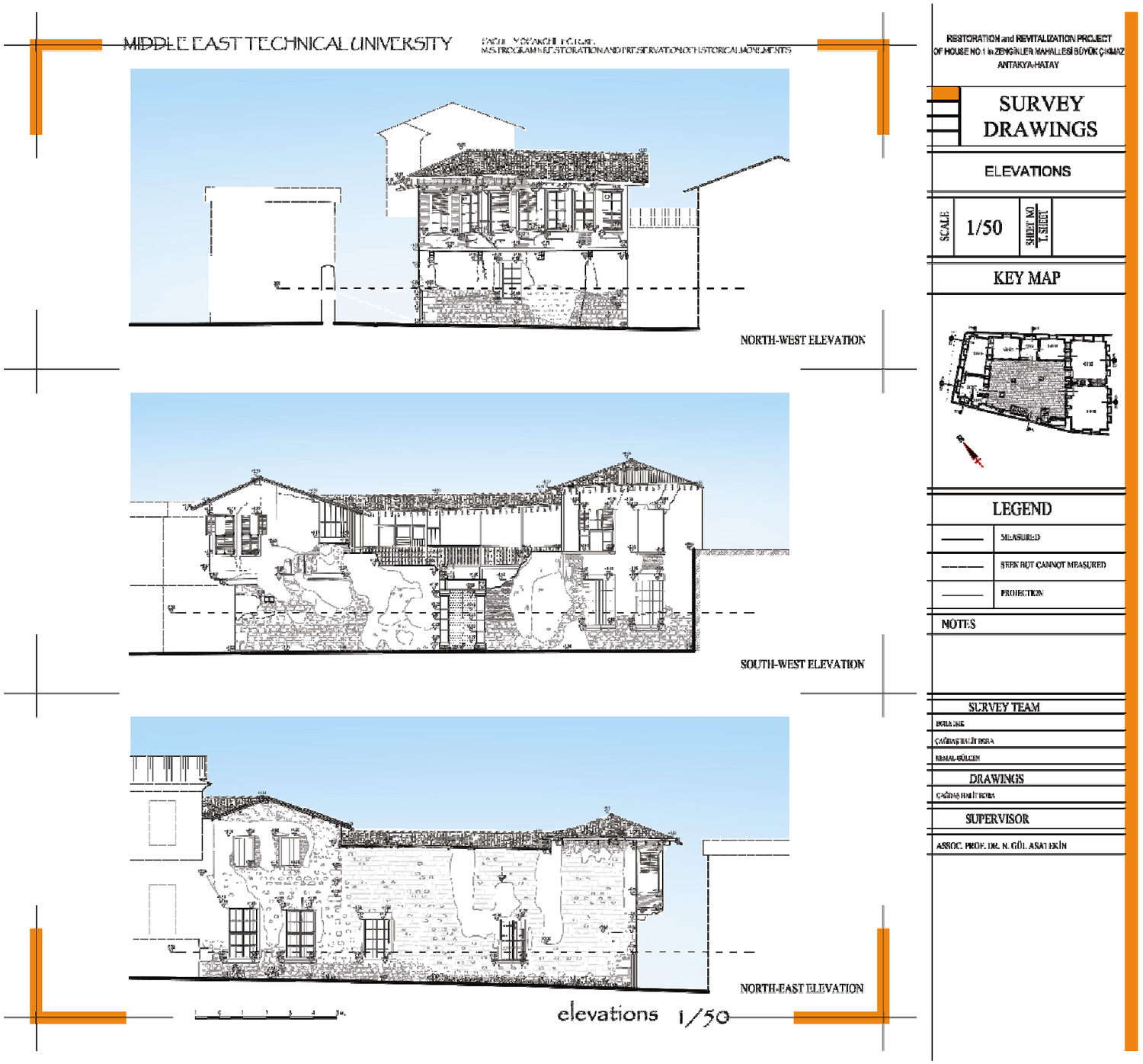


Illustration 10: Survey Drawings - Elevations

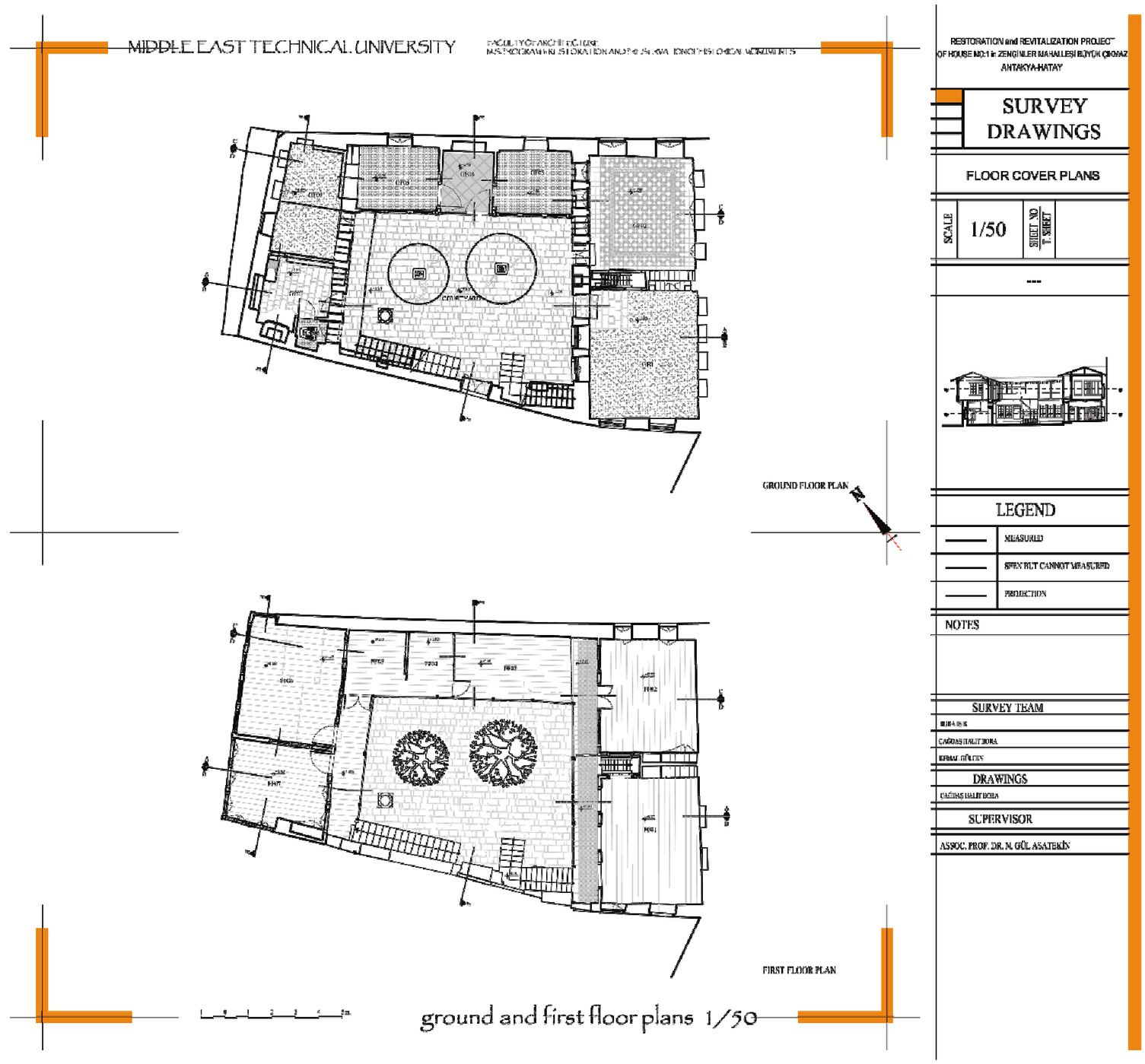


Illustration 11: Survey Drawings – Flor Cover Plans

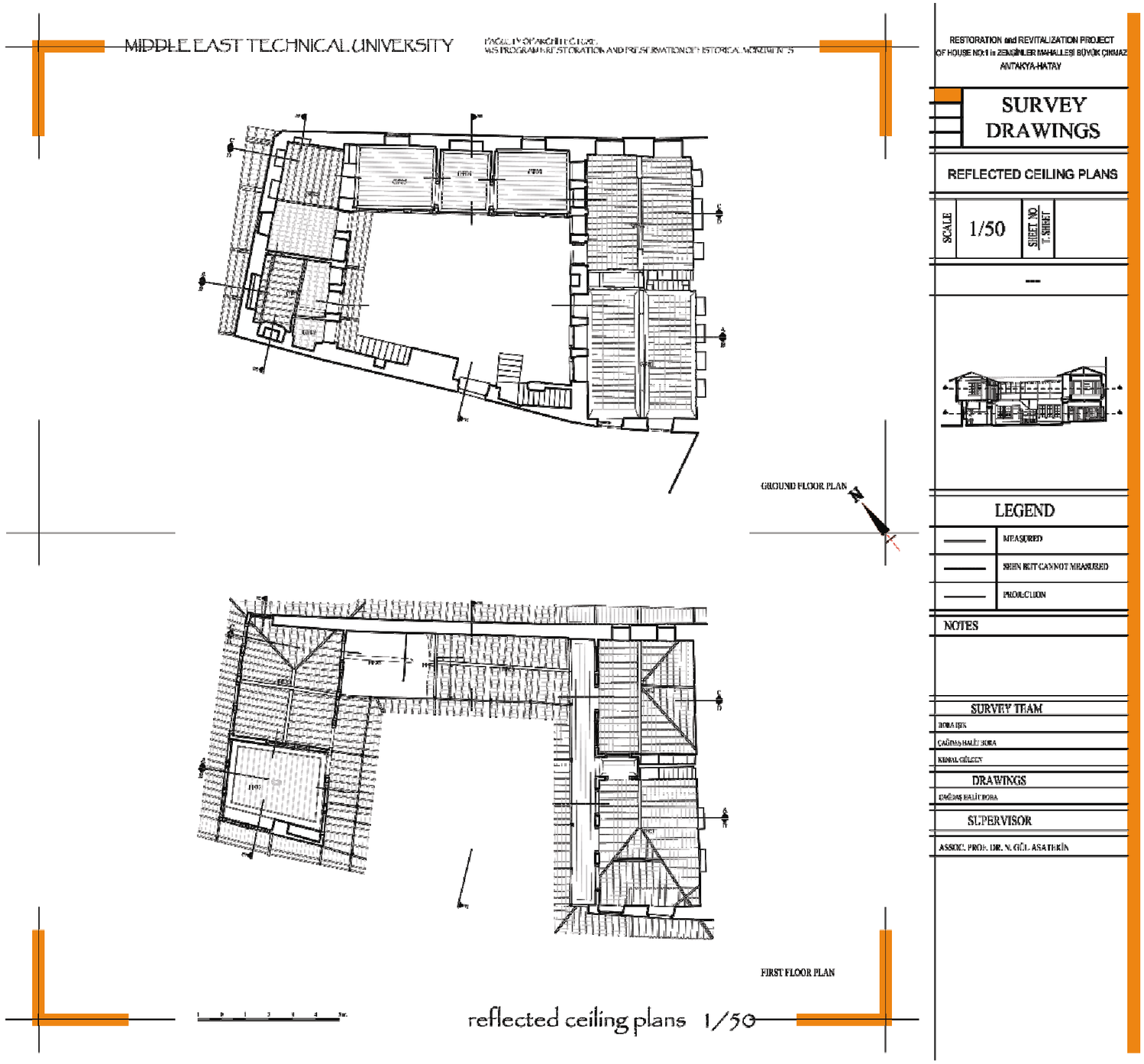


Illustration 12: Survey Drawings – Reflected Ceiling Plans

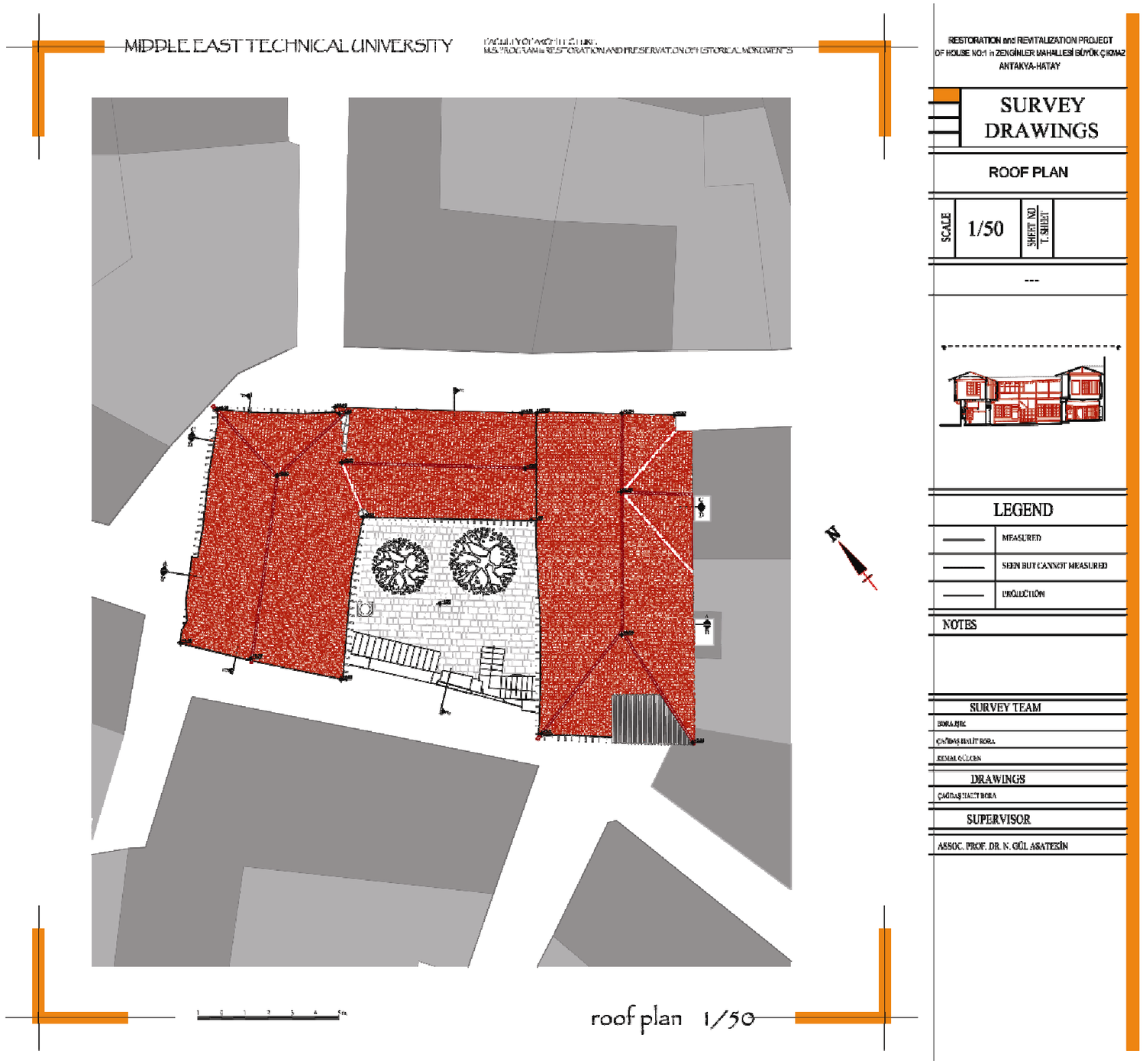


Illustration 13: Survey Drawings – Roof Plan

2.3.4. ANALYSIS OF THE BUILDING

Within the context of analysis, in light of visual observations which have been done in 2003 and examinations which have been done during the site survey, the building is studied according to their physical and architectural features. In this respect, building materials and elements, construction techniques, structural systems and the material deteriorations and structural deformations seen on the building have been examined. In addition to this, the changes which the building has subjected in the past have been studied to shed light on further stages in the restitution.

2.3.4.1. BUILDING ELEMENTS AND MATERIALS

The building elements are classified according to their functional use in the building. So, the groups are occurred as structural elements, architectural elements and finishing elements. The mapping drawings, schematic drawings and typological studies have been prepared in order to identify those properties of the building.

2.3.4.1.1. STRUCTURAL ELEMENTS

Under the heading of structural elements, the materials and elements which carry the building is touched on. They are classified according to their construction techniques.

2.3.4.1.1.1. VERTICAL ELEMENTS

- **MASONRY ELEMENTS**

There are two types observed as stone and brick in the building constructed with masonry technique.

The stone masonry walls are the ground floor walls of the building. Moreover, the courtyard wall, both north-east and south west walls of the south east mass, the first floor walls of the north-east and north-west masses at north-east side are also stone masonry. Even though it has not perceived certainly, it is thought that the wall adjacent to the neighbour building is stone masonry, as well.

The thickness of the stone masonry varies between 60cm and 75cm. Fine cut stone blocks, cut stones and rubble stone pieces in various sizes have been used as the units of the stone masonry. In general, fine cut stones have used on the corner of the walls and around the openings. In addition, they used like piers on both sides of the courtyard wall. Cut stones come up right after the fine cut stones. They used like transition elements in-between fine cut and rubble stones. The rubble stones have been used in wide areas between the corners as arranged rows defined by the cut stones near the corners.

The units of the brick masonry are the baked bricks prepared 19cmX9cmX5cm in dimension. The use of brick masonry has been observed underneath the windows of FF01 space which open out to south-west façade of the building. They could only be seen the surfaces where the plasters has been lost. At the same space, the brickworks have been seen at the backside of the cupboards adjacent to the neighbour building. Another part that has been constructed by brick masonry technique is right side of the courtyard wall. It is at the landing of the stair from the bottom and rises up to +1.50m level. The bond of brickwork has used under the double flight stair located at the courtyard. Finally, it has been used around the windows of the FF02 which open out to north-east façade of the building. It is thought that the brickworks around the openings used as single units. Otherwise, the walls would not be that thick at those parts.

- **TIMBER FRAME ELEMENTS**

Timber frame elements are the vertical units of timber skeletal system used to build especially the first floor walls and some other partition walls which have also used for carrying purposes.

Timber posts have been used in various sections and heights. They used in the structure of first floor walls. At the corners and at the sides of the openings, use of 15cmX15cm and 10cmX10cm posts is common. In other parts, 5cmX10cm posts have been seen. All these post carry the roof structure. The post on the ground floor carry the first floor of north-east mass. On the other hand, there are timber posts which define the “mabeyn” in-between the GF01 and GF02 spaces. These post continues at the first floor up to roof and used as a framework for the cupboards.

The vertical timber frame elements have been used with of without infill materials if they are the members of solid walls. The infill materials could be rubble stone of again rubble stone but with mortar. If there is no infill, the wood-laths have been used for cladding.

2.3.4.1.1.2. HORIZONTAL ELEMENTS

- **MASONRY ELEMENTS**

The horizontal elements used in the masonry are stone arches, brick arches, stone and timber buttresses, stone lintels and sills, timber lintels, timber bond beams and a concrete lintel used also as a porch on the courtyard door.

Stone arches have spanned the door and window openings on courtyard walls of the GF02, GF06, GF07 and GF08 spaces. Two courtyard windows of the GF01 space have stone flat arches. There is a stone arch on the ventilation niche in GF07 space.

All windows and the entrance door of GF01 space have been spanned with brick arches on top.

Stone and timber buttresses have been used together on both long walls of the north-west mass. It can be said that the timber buttresses are the units of both

masonry and timber frame elements as horizontal by thinking of their relations with these two.

Fine cut stone lintels and sills can be seen on the top of the windows located at south-west elevation on both stories. The windows located on the ground floor of north-west elevation and the other ground floor windows of north-east elevation have fine cut stone lintels and sills, as well. Except the entrance door of GF01 space, all of the doors placed in masonry and open out to courtyard have been spanned with timber lintels. In addition to this, the second floor windows of the north-east elevation have timber lintels on top. They have been used as window frames, as well.

At some parts, even the vast majority of the surfaces have been plastered, the use of timber bond beams can easily be seen.

- **TIMBER FRAME ELEMENTS**

The horizontal timber frame elements are timber beams, timber floorings and the timber buttresses.

Timber beams have been used on the top of the timber posts. They combined post and distribute the load which they carry. They have been used inside of the timber skeletal walls and at outside on the top of the semi open spaces. The dimensions of them can vary 7cmX15cm to 10cmX19cm.

All spaces located at first floor have the same construction technique. They consist of primary beams in thick sections and secondary beams which are thinner. The spans among the secondary beams are 20cm in general. Timber flooring can carry the ceiling covers or mosaic tile flooring as in the circulation corridor. Timber floorings have also used on the mezzanine-like floor constructions of GF06 and GF07 spaces.

2.3.4.1.1.3. ROOF ELEMENTS

The roofs of the building are pitched on each mass. The mass at the north-east has a gable roof which has two slope directions. Other two masses have hip roofs that consist of three slopes in different directions.

The roofs stand on the timber beams and masonry walls. At some parts, bearing plates and eave purlins have been used on the masonry walls but it is not common. The rafters of the roof can sit on the stone masonry without these elements as north-east elevation.

They stand on two purlins at sides and ridge purlins in the middle. The rafters have been placed at opposite sides with 20cm spaces. The ridge purlins can be fine cut or log. In FF06 space, a hanger-like stud has been used to support the roof in-between the ridge purlin and the log in the middle of the room.

2.3.4.1.1.4. BINDING ELEMENTS

There are three types of mortars which have been used in the building. They have been classified as lime mortar, mud mortar and cement mortar according to their ingredients.

The vast majority of the mortars used in the building are lime based. As it was mentioned in previous stages, there are three types of stone masonries and brick masonry techniques have been observed in the building. In any case, lime mortar has been used as the binding material between the units.

In some parts of the timber skeletal walls of north-west mass, mud mortar has been used as binding material.

Cement mortars have been observed on the wall underneath the double flight stair at the courtyard. Furthermore, the binding material of the brick wall near the courtyard door is cement mortar.

2.3.4.1.2. NON-STRUCTURAL ELEMENTS

These are the elements which have no carrying or supporting purposes. They have been used for separating the spaces or filling the gaps in the timber skeletal walls.

There are three partitions in the building. Two of them are located at the first floor of north-east mass. They are timber panels and divide the whole first floor into three. The other one has been placed in GF07 space to create the GF08 space. Being different from the other two, this is a solid timber skeletal wall. It does not rise up to ceiling level.

Small pieces of rubble stones and mud bricks have been used inside of the various parts of timber skeletal walls.

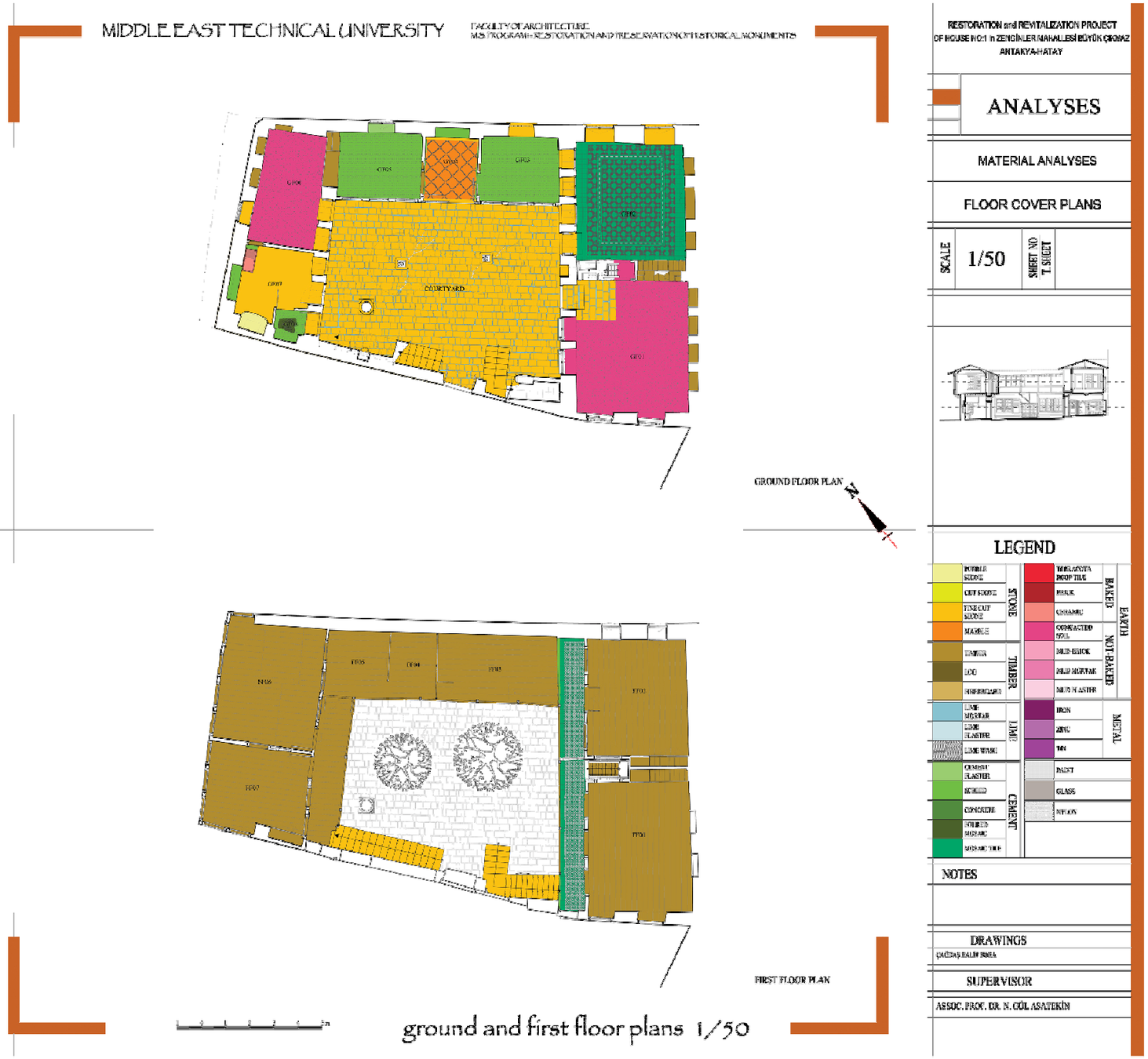


Illustration 14: Material Analyses - Floor Cover Plans

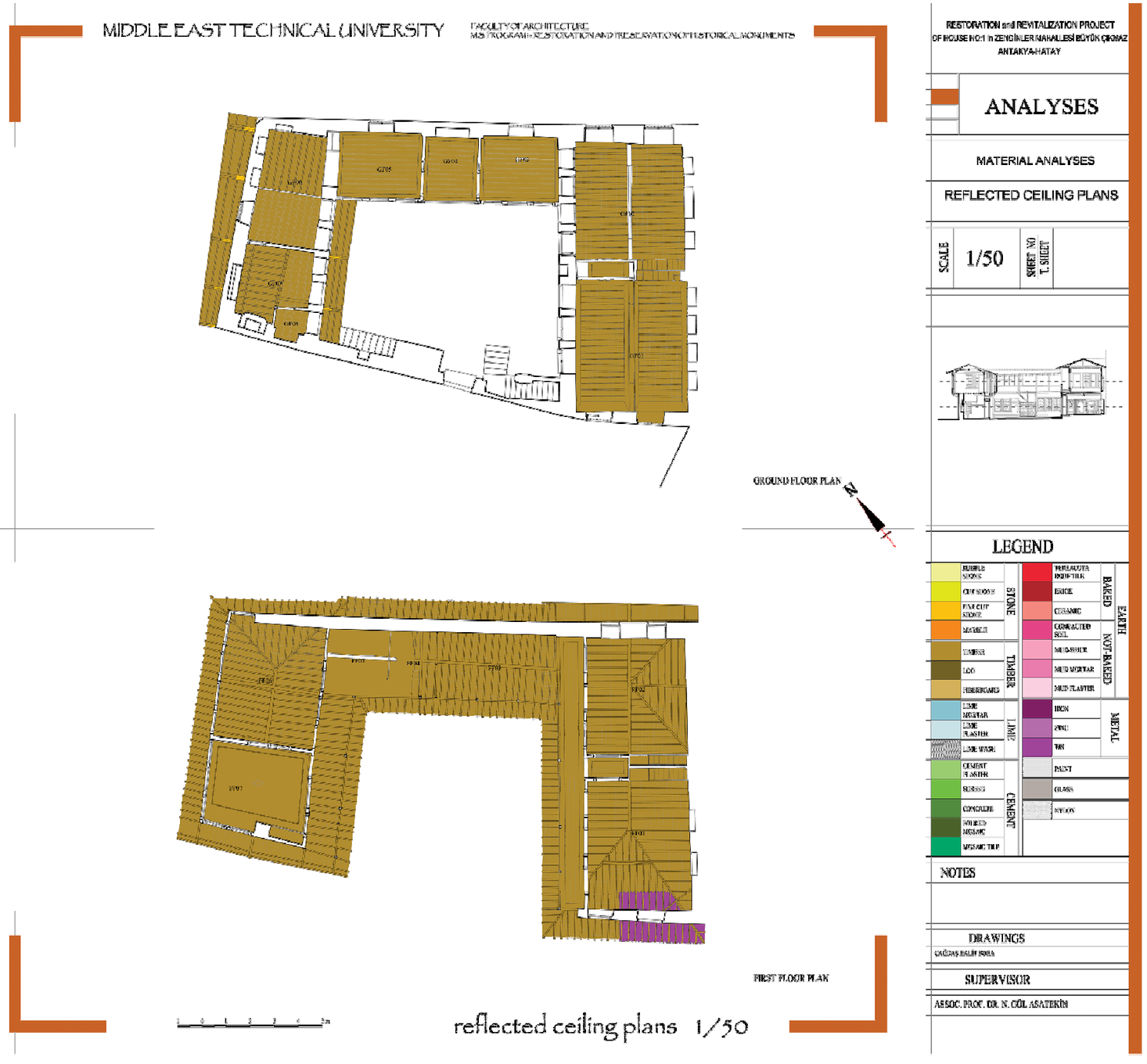


Illustration 15: Material Analyses – Reflected Ceiling Plans

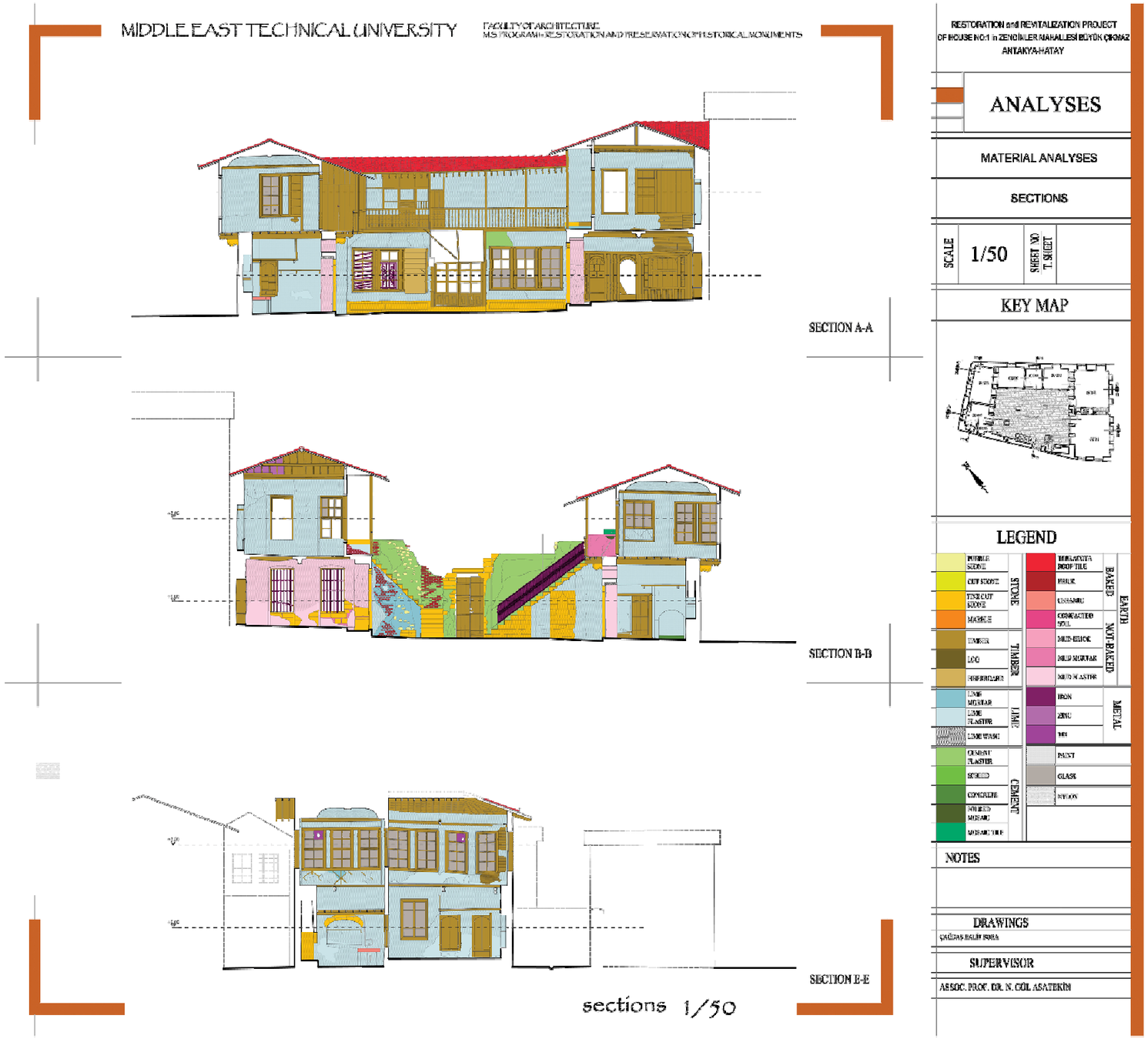


Illustration 16: Material Analyses – Sections 1

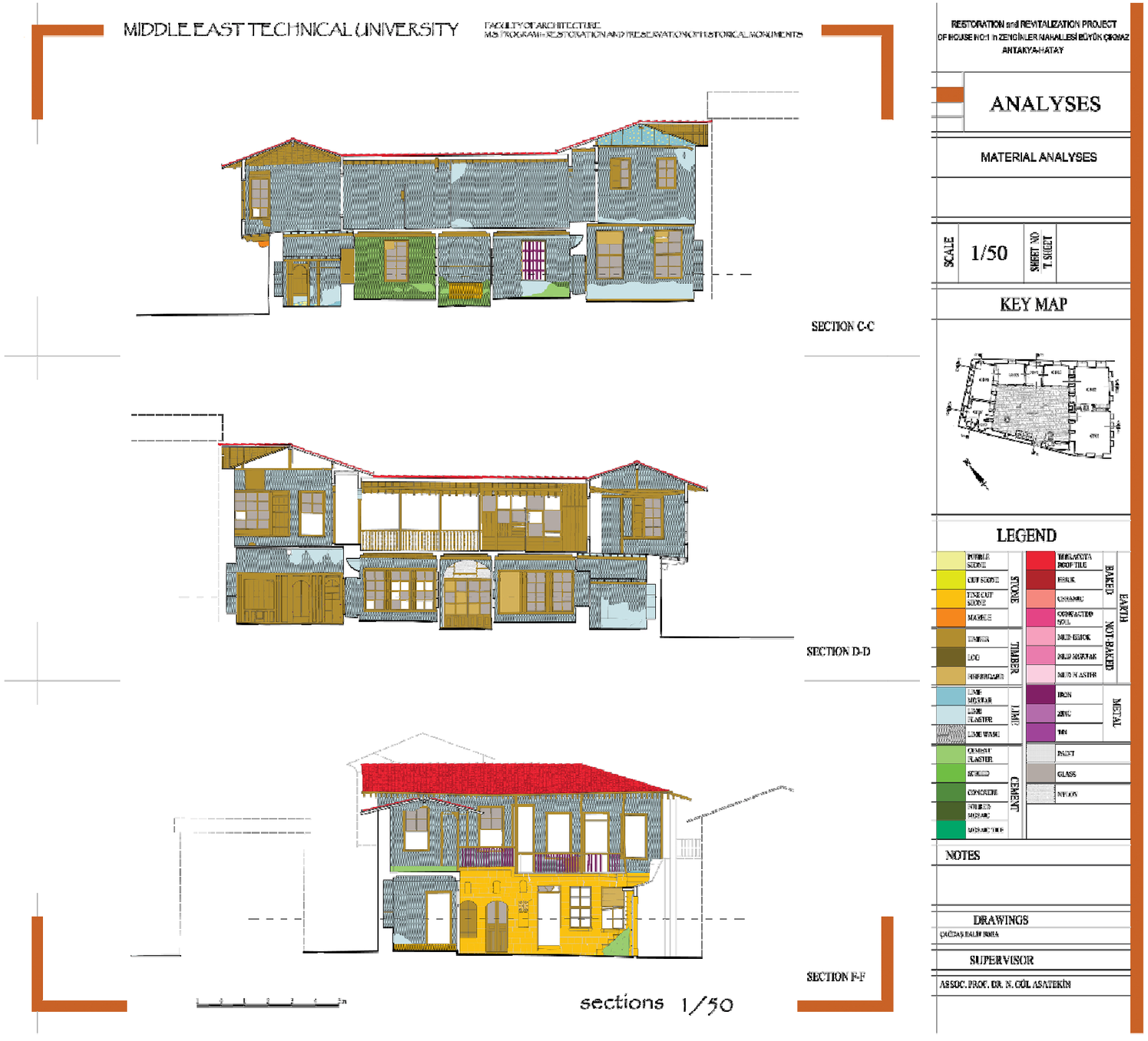


Illustration 17: Material Analyses – Sections 2

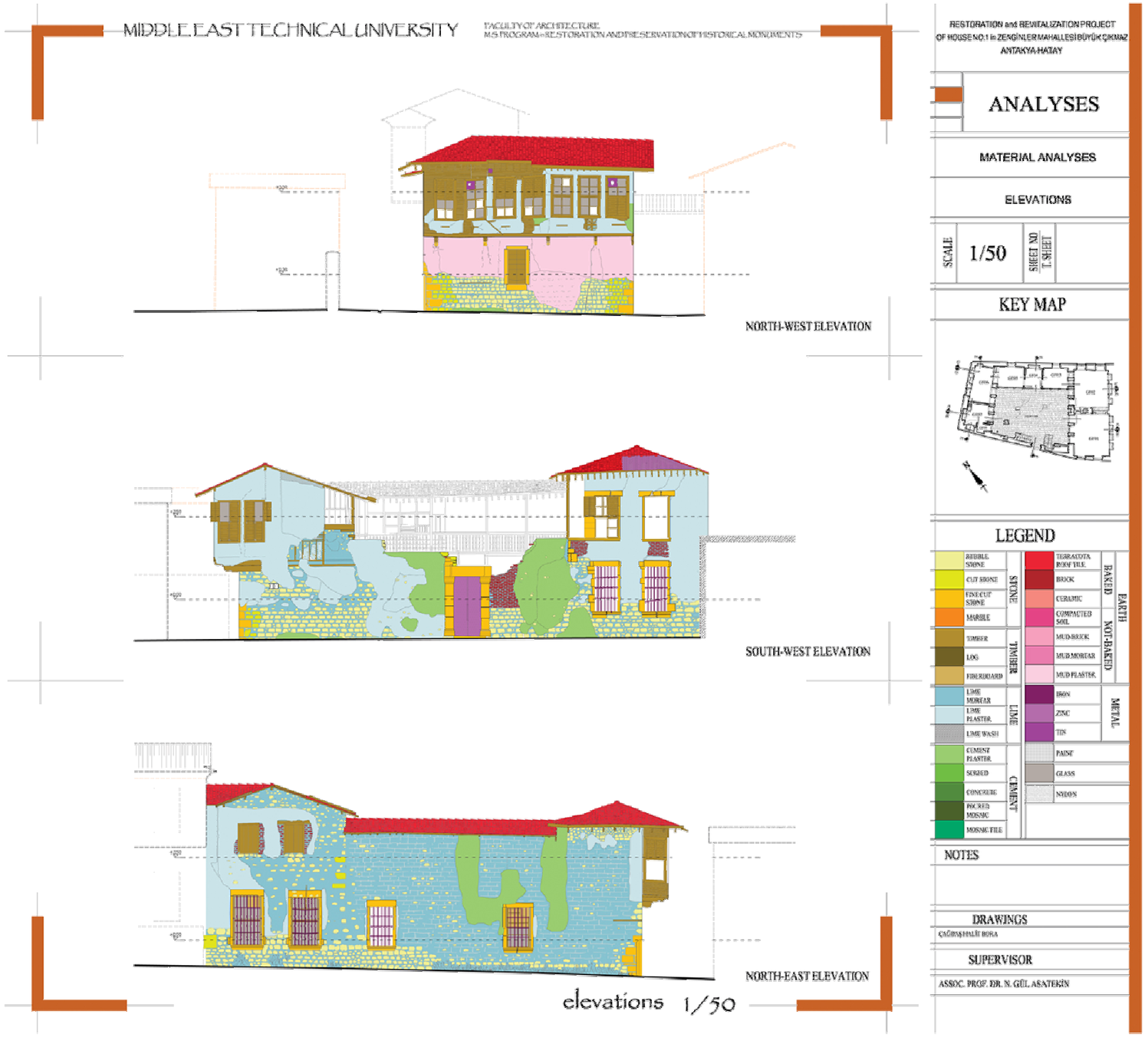


Illustration 18: Material Analyses - Elevations

2.3.4.2. ARCHITECTURAL ELEMENTS

2.3.4.2.1. DOORS

There are eighteen door openings in the building. Eleven of them are located on the ground floor and the other seven doors are located at the first floor. Four of them have no wings today.

Doors have been classified according to their major properties as material, location, number of wings and the lighting elements if they exist (Drawing x.x). There are two doors which is the components of the jerry-built partition walls. These doors have been exempted from the classification study.

Considering the material, typological study has been formed under the two headings as timber door with metal cladding (M) and timber doors (T). If the locations of the doors are taking into account, the groups can be occurred as follows; door on the courtyard wall (W) means the entrance door of the building, (F) stands for doors on the courtyard façade in other words the exterior doors and the interior doors with (I) abbreviation. The doors of the building have been divided into two categories as single and double according to their number of wings. The abbreviation (1) stands for the single wing doors and (2) for double wings. Some of the doors provide light to their spaces as well as provide an entrance. Lighting can be provided by a sleeper frame (F) and/or the door wing contains glazed frames (G). Furthermore, there is only a small opening on the door wing in one example (O). The abbreviation (L) is used for the doors which have a lighting element and (nL) stands for the doors which have not any lighting element.

- **Courtyard Door (DMW-2nL)**

The entrance of the building is provided by the door on courtyard wall. The opening has been defined by using fine cut stone blocks. There are two pillars on both sides and each one has six pieces. The opening has been spanned

with a fine cut stone block and the frame of the door has been completed with two small pieces on both sides of the lintel. The door sill is also made of cut stone and built of one piece. The door consists of two wings. The street face of the timber entrance door has been covered with zinc. There are metal knobs approximately every five cm on the zinc surface. The inner face of the door is of timber. There is also a concrete door-hood on the inner face and it works as a lintel, as well. The original door latch and shackle are still on the timber door.

- **Exterior Doors (The Doors On the Courtyard Façades)**

The seven of the existing doors gathered under this category. All of them are made of timber. Three of them consist of single wing and the other four have double wings. Both two types have one window which has no lighting element. Two of the double wing doors have either glazed wings or fixed lighting frames. One of the double wing doors has only glazed wings. The single wing doors divided into two according to their lighting elements. The door DTF-1LO has only a small opening on it whereas the DTF-1LF has a fixed frame on the top of it.

- **Interior Doors (DTI)**

The two interior doors are of timber and have no lighting element. One of them (DTI-1nL) has single solid wing. The other one is located in a timber face arranged as a cupboard surface and has two wings (DTI-2nL).

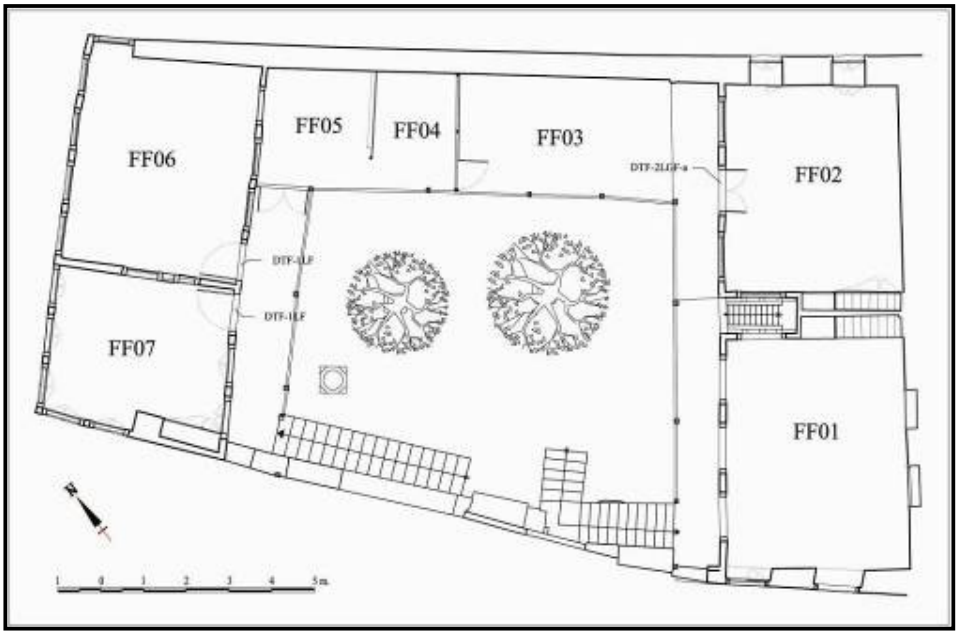


Illustration 19: Key Map of Door Typology of Ground Floor

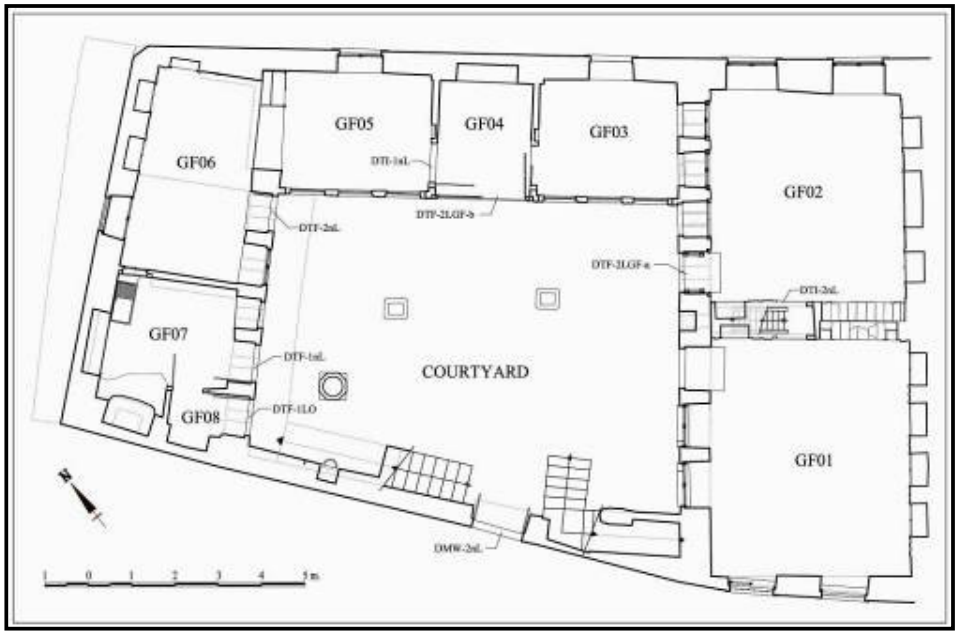
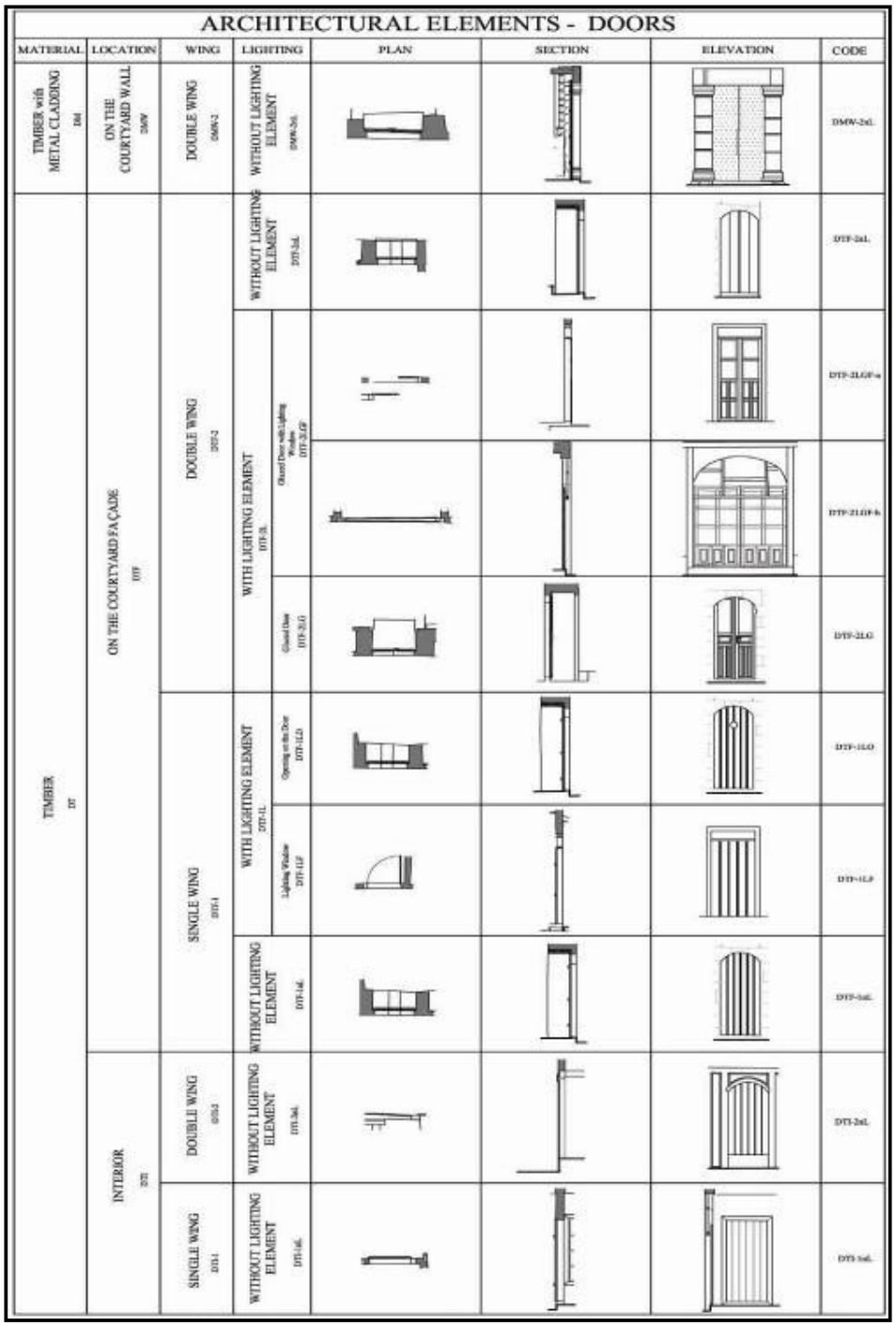


Illustration 20: Key Map of Door Typology of First Floor

Table 1: Architectural Elements - Doors



2.3.4.2.2. WINDOWS

There are forty eight window openings in the building and all of them are made of timber. Twenty two windows are located at ground floor and the other twenty six are at first floor. Six of the windows are bed lights (interior windows). Today, some of the windows only have their frames, the glazing and the wings of them have been lost.

The classification of windows is carried out according to their opening type, number and the form of the wings. The windows are grouped under two main heading as sash and side-hung when the opening type has been taken into consideration. They can have single, double or four wings and the forms of the windows are either rectangular or arched.

- **Sash Windows (WTS)**

The sash windows - in other words the guillotine windows – have two components. One is at the top which is also stable and the other one at the bottom and can vertically slide. Each components of the sash are glazed and divided into four by using wooden laths. All of the sash windows are rectangular. Eighteen of the windows in the building are sash windows. Six of them are located on ground floor and the other twelve are at first floor.

- **Side-hung Windows (WTSH)**

The vast majority of the windows are side-hung windows which open rotating ninety degrees. They are divided into three as single wing, double wings and four wings according to the number of wings.

The single wing windows (WTSH-1) are the smaller ones which belong to “kuş takası”. They are all rectangular windows and glazed parts are divided into two with a wooden lath. The double wing windows (WTSH-2) divided into three from

the glazed parts with wooden laths and they can be either rectangular (WTSH-2R) or arched (WTSH-2A). The four wing windows (WTSH-4) are all rectangular. Two wings of them are located at the top and other two are located at the bottom. There is a wooden lath in the middle of the opening which stops the wings. All the wings are divided into two with a wooden lath again and open rotating ninety degrees to inside of the spaces.

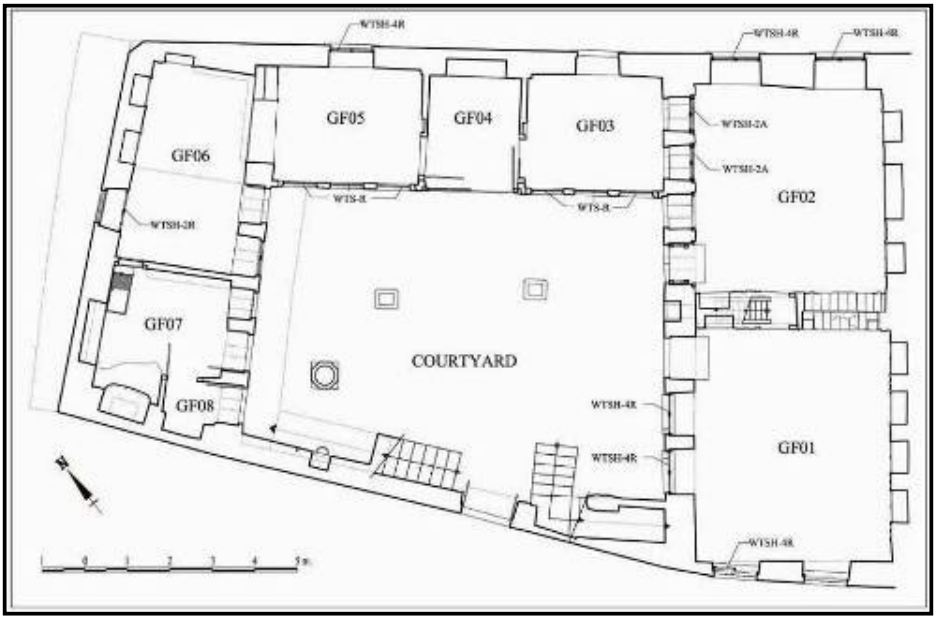


Illustration 21: Key Map of Window Typology of Ground Floor

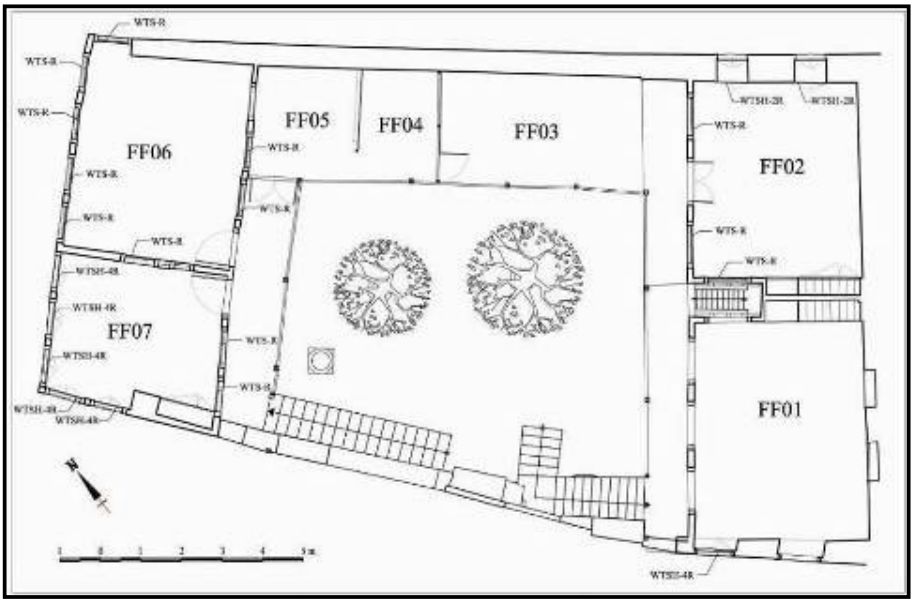
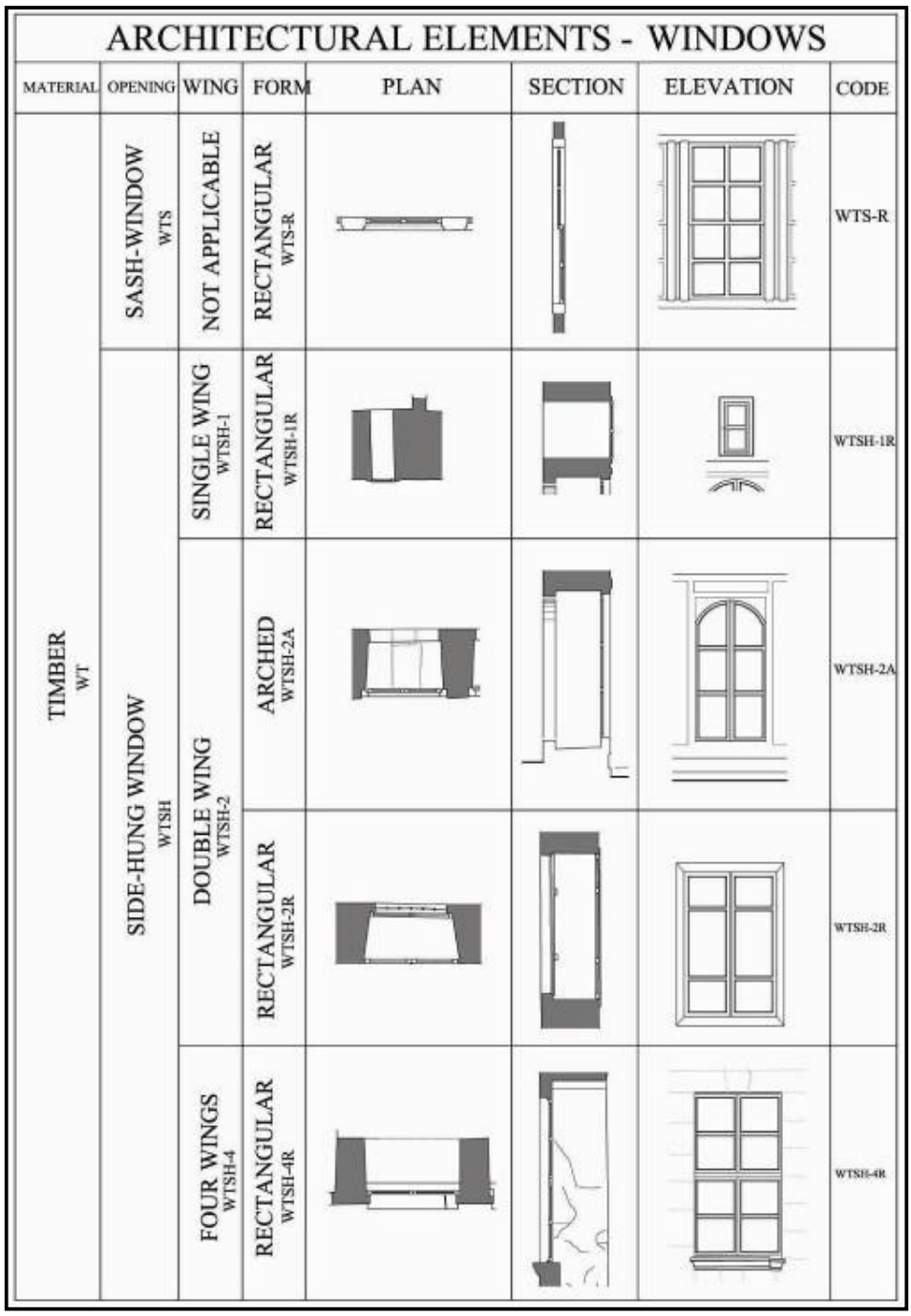


Illustration 22: Key Map of Window Typology of First Floor

Table 2: Architectural Elements - Windows



2.3.4.2.3. SHUTTERS

There are eighteen shutters used in the building but this is not the exact number because of the removals has been done. Five of the shutters are at ground floor and the other thirteen are placed on the windows at the first floor of the building. All of these shutters are of timber.

There are three main types for the shutters. The first group is louvre type and the second group shutters are solid timbers.

- **Louvre Shutters (SL)**

This type of the shutters is grouped in two categories as shutters have four folding and shutters have three folding. Both two groups of shutters are in rectangular forms and on rectangular openings. The first group of shutters (SLR-4F) has four wings which open rotating one hundred and eighty degrees. There is a wooden lath in the middle of the openings to stop the wings. The second group (SLR-1S2F) has three components. The opening is divided into two horizontally. The top part has a stable wing even it seems like it has two wings. The bottom part has two folding rotating ninety degrees through outside. The two wings stop by sitting on the stable one. Both two types of shutters can provide daylight to inside without opening with their wings. The laths on the wings can move vertically independent from the wings.

- **Solid Timber Shutters (SS)**

This type of shutters have solid timber panel wing which let the daylight in only when they are open. They have either rectangular wings on rectangular openings (SSR-2F) or rectangular wings on arched openings (SSR-2A). In both cases, the number of wings that they have is two. The opening direction of the shutters are through outside by rotation ninety of one hundred and eighty degrees.

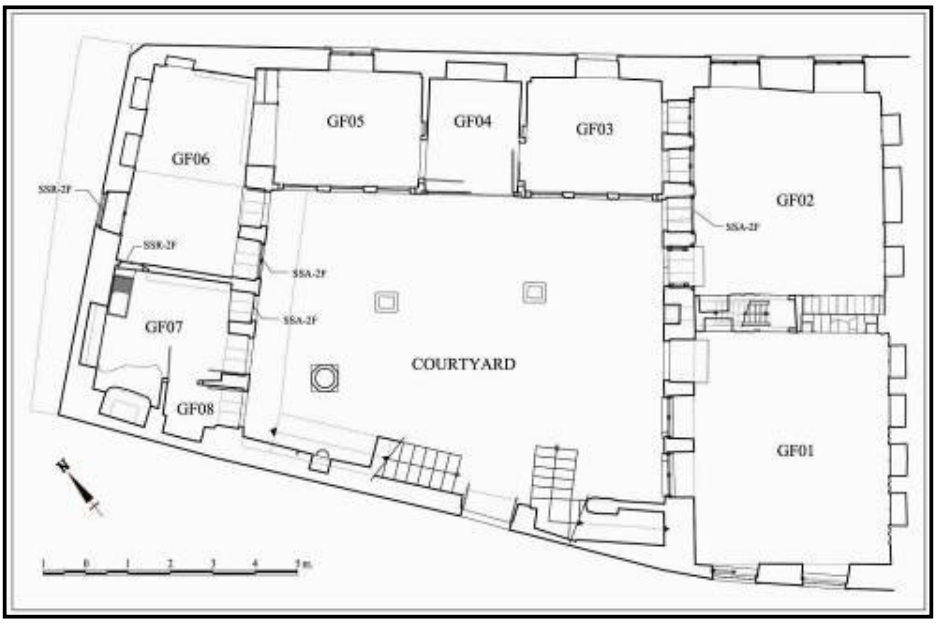


Illustration 24: Key Map of Shutter Typology of Ground Floor

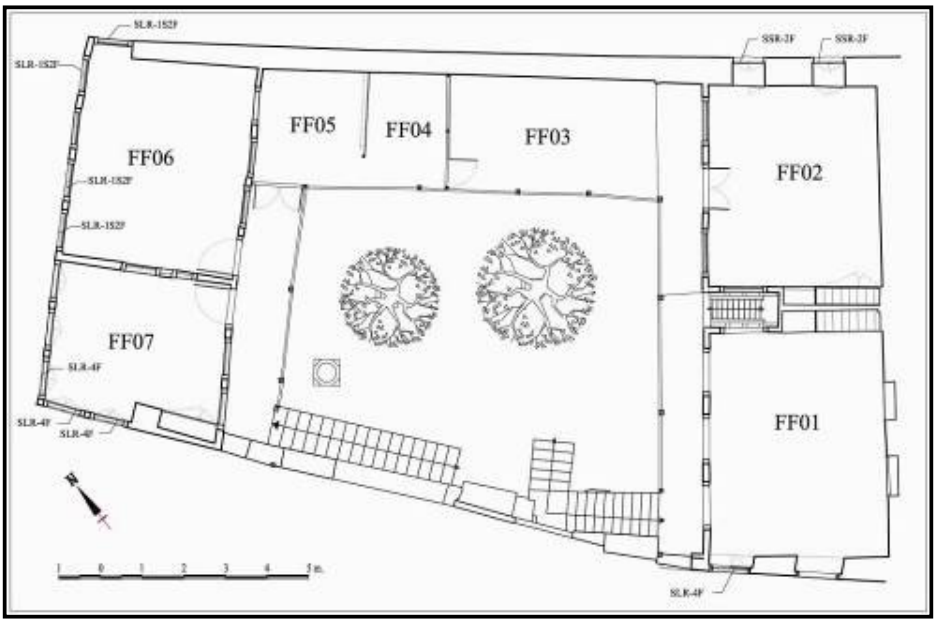
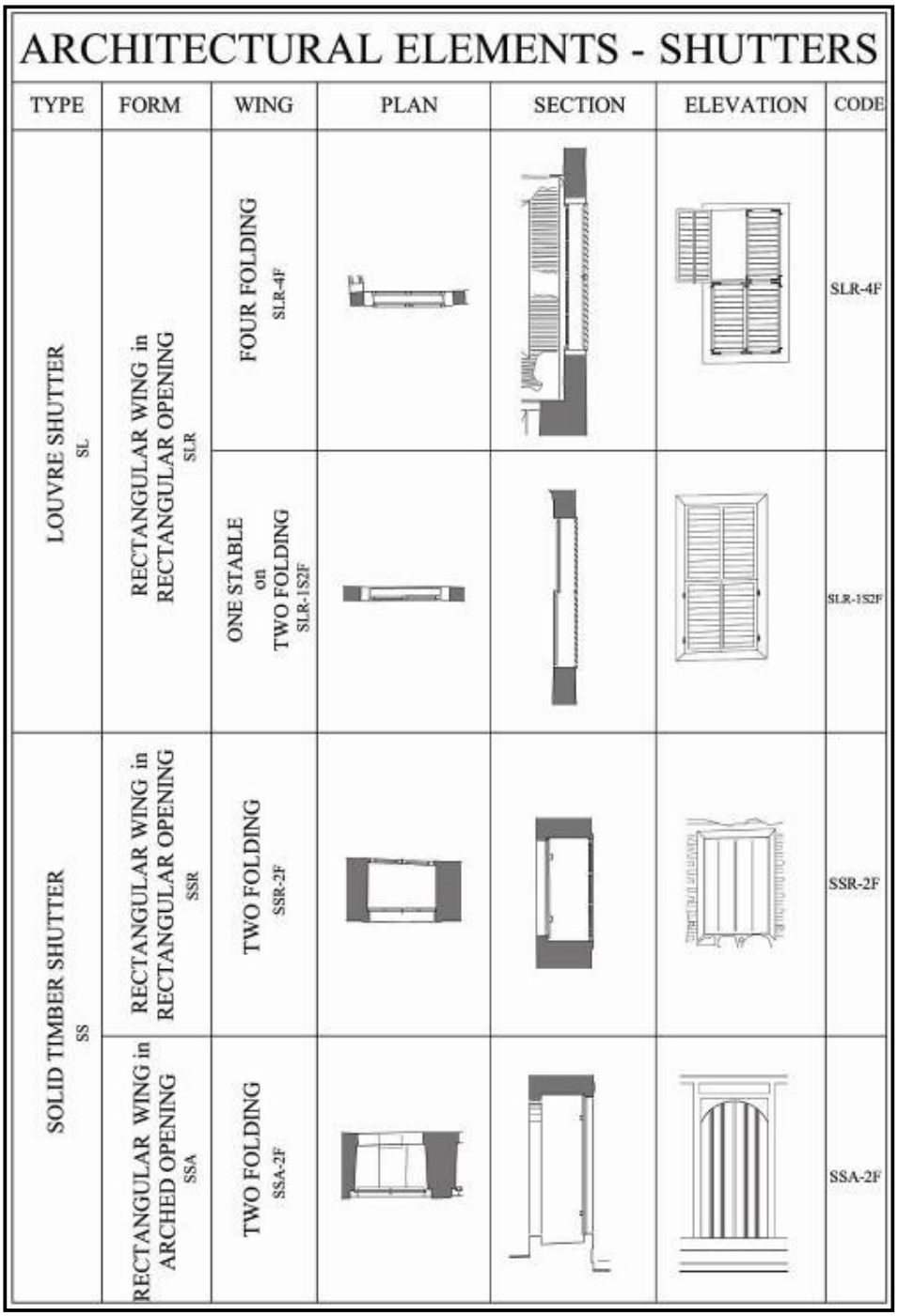


Illustration 23: Key Map of Shutters of First Floor

Table 3: Architectural Elements - Shutters



2.3.4.2.4. CUPBOARDS AND NICHES

Cupboards which are located in the walls and are also known as “mahmel” (Demir 1996, 245) in traditional Antakya houses are studied together with the niches through their similar functions and arrangements. There are fourteen cupboards and eleven niches in the building. All of the cupboards are of timber. The interior niches are also of timber except one plastered located in the stone masonry. The exterior niches are made of fine cut stone blocks. Cupboards and niches are classified according to their organisations as follows; single cupboards (CS), cupboards organised on the entire façade (CF), cupboards have two partitions (CP), cupboard with niche (C-N), niches arranged as a part (N-P) of a door (N-PD) or a window (N-PW) and niches on the stone masonry (NS).

- **Single Cupboards (CS)**

The simple cupboards have been designed on its own in the stone masonry. There are three types of simple cupboards in the building. The first type has been designed bare like a niche with doors (CS-a). The second group of the simple cupboards has a better and painstaking design (CS-c). The third group has been designed carefully with a frame not only encloses the cupboard but also an area near the corners. The doors of the cupboards and the other elements are more detailed.

- **Cupboards Organised on the Entire Façade (CF)**

Two interior façades of GF01 space and one façade of the GF02 space have been designed as they consist of cupboards. The north-east façade of GF01 (CFcCND-b) and the south-west façade of GF02 (CFcCND-a) are very similar. Both two have cupboards (C), a door (D) and niches (N) in their organisations. The south-east façade of the GF01 is composed of four cupboards designed as a whole cupboard (CFcC).

- **Cupboards Have Two Partitions (CP)**

There are three types of the cupboards coded with (CP). The first group of cupboards is vertically parted (CPV). The second one consists of cupboards which have horizontal division (CPH).

- **Cupboard with Niche (C-N)**

There is a cupboard in FF01 space which has been designed with a niche as a whole. It is very similar with CPV type.

- **Niches Arranged as a Part of a Door or a Window (N-P)**

There are four niches located in the timber skeletal walls. Two of them have been deigned as a part of a door (N-PD) and other two niches with bed lights (N-PW).

- **Niches on the Stone Masonry (NS)**

There are three niches on the stone masonry. One of them is in GF04 space, so, it takes place under the heading of interior (NSI). This niche is a large one which has been spanned with a semi-circular arch on top. There is wooden lath which most probably is for supporting a shelf that does not exist today. The entire niche is lime plastered and lime-washed like the other surfaces of the room. The other two niches are located at the outside NSE). One of them is just above the wash basin on the courtyard wall (NSE-a). The other one is on the north-west façade of the south-east mass right in the middle of GF01 and GF02 spaces NSE-b). It has also been emphasized with “rozet” stone on the top.

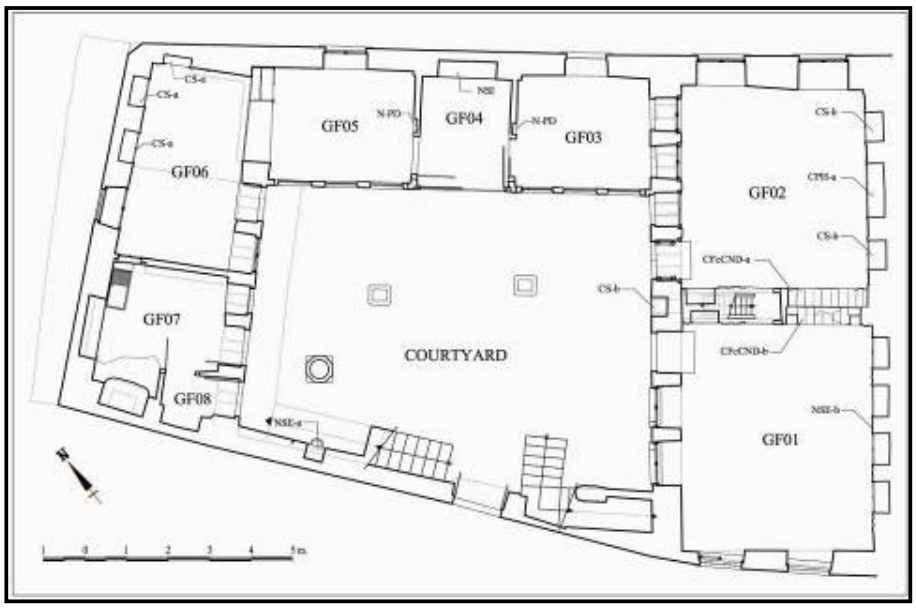


Illustration 26: Key Map of Cupboards and Niches at Ground Floor

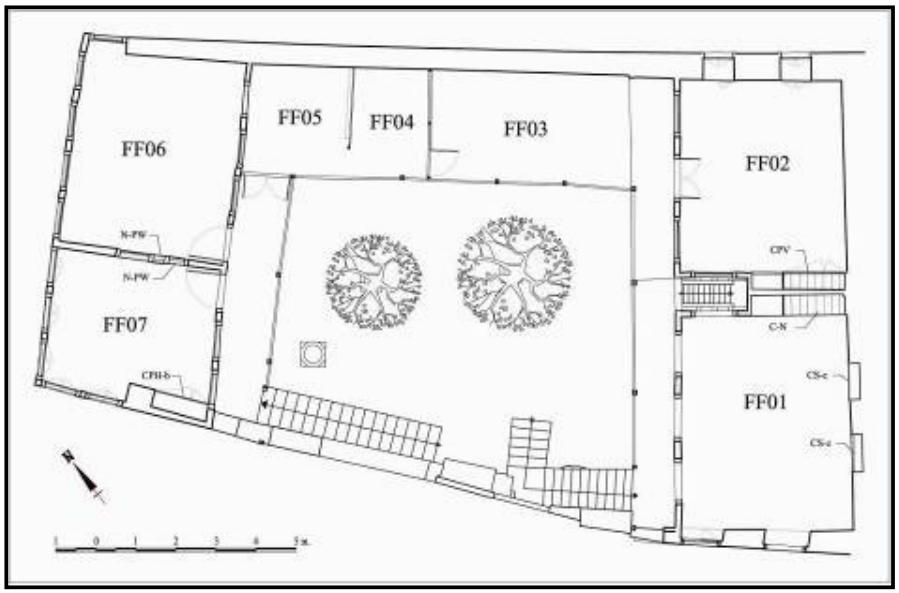


Illustration 25: Key Map of Cupboards and Niches at First Floor

Table 4: Architectural Elements – Cupboards and Niches 1

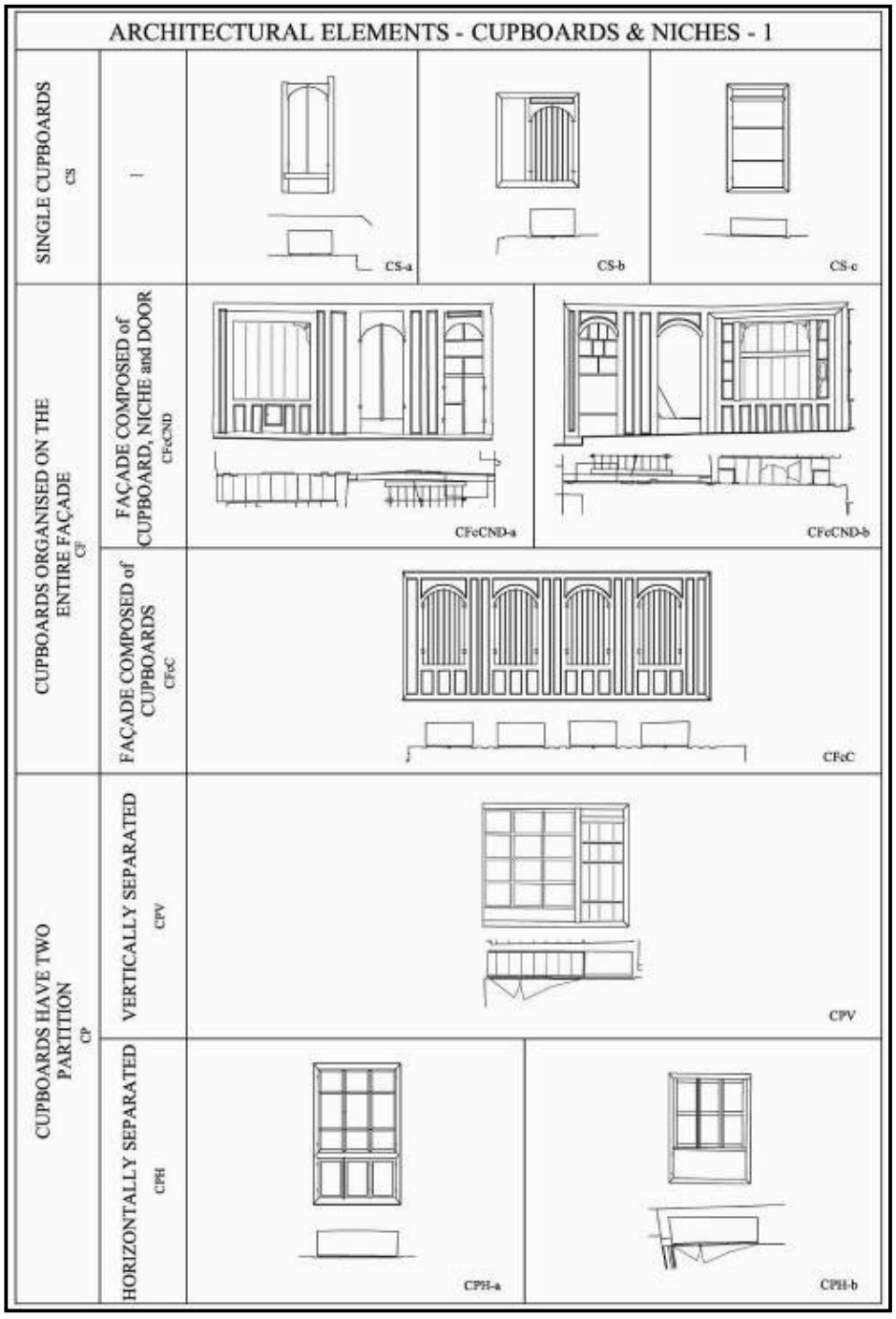
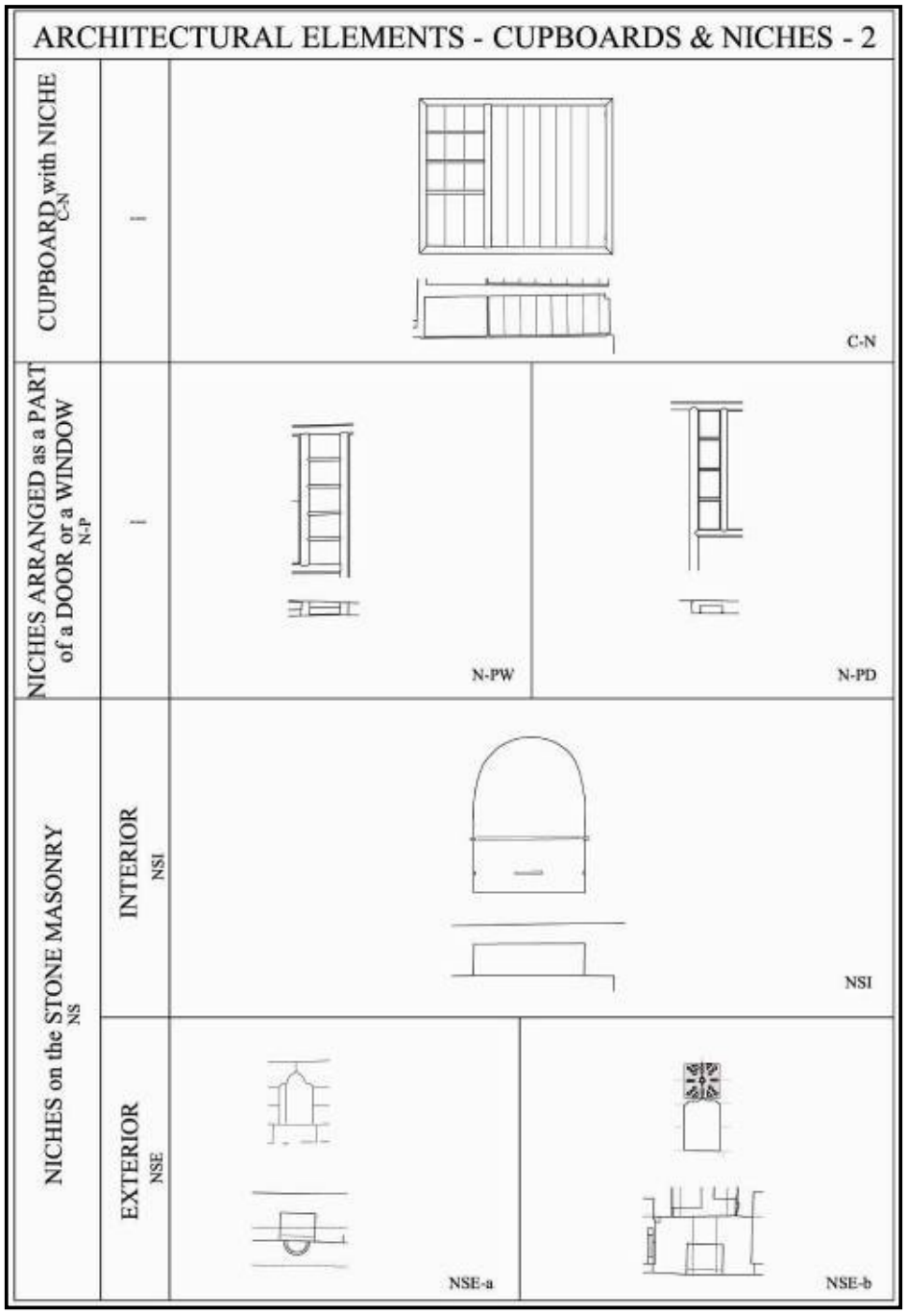


Table 5: Architectural Elements – Cupboards and Niches 2



2.3.4.2.5. "MABEYN"

Mabeyn is a small concealed room which is entered with a door seems like one of the lid of a cupboard that belongs to an interior façade consist of cupboards and it provides horizontal and/or - by a narrow stair - vertical circulation in some of the Antakya houses (Demir 1996, 247). It is located in-between GF01 and GF02 spaces. It also riches upper floor via timber staircase which has eleven steps. The wing of the door at this floor does not exist. Both two sides of the stair are enclosed with timber frame walls. The wall which the stair has been settled is stone masonry.

Figure 27 : "Mabeyn" (author April, 2003)

2.3.4.2.6. STAIRCASES

There are three staircases in the building. Two of them are located in the courtyard and are made of fine cut stones. The other one is of timber and located in "mabeyn".

One of the stone stairs goes up to first floor of north-west mass. It is located at the left side of the entrance door of the courtyard. The stair has one flight and sixteen cut stone steps 90cm in width. Each step is 20cm in height and the landings are 26.5cm. The steps are lengthened inside of the courtyard wall and the wall is in same width for first seven steps. At this part the wall is composed of fine cut stones. After this part the steps are only supported by courtyard wall from one side. The steps are project above the wash basin located on the courtyard wall. The shape of the steps is simply detailed with a curve from the bottom. There is a iron balustrade at the right side of the stair.

The stone stair which is located at the right hand side of the courtyard entrance is “L” shaped and goes up to first floor of south-east mass. It has double flights and consists of sixteen steps. Ten of the steps are at second flight and the six of them are at first flight. The first step of the stair is just like the steps at other stone stair but the others are more detailed in comparison to the one flight stone stair’s steps. Unlike the other stair, the steps do not get inside to the courtyard wall. Each step carry the one above and also a jerry-built composite wall built up with bricks and rubble stone pieces supports the steps of second flight. The width of the stair is 95cm. The height of the steps is 17cm and the landings are 25cm.

The timber stair in “mabeyn” is composed of two timber beams 10cm by 25cm in dimension and the timber steps which have been dovetailed and nailed into beams. These two beams have been supported with two newels on both sides and another beam combines them at first floor level. There are nine steps on the stair. The height of the steps is remarkably high because of the narrow space which encloses it. The landings are not ergonomic due to its steep fixing.

Figure 38: Stone Stair at the North-west Side of the Courtyard (author April, 2003)

Figure 29: Stone Stair at the South-east Side of the Courtyard (author April, 2003)

Figure 30: Timber Stair in “Mabeyn” (author April, 2003)

2.3.4.2.7. "KUŞ TAKASI"

Clerestory windows which are called as “tepe penceresi” or “kafa penceresi” are interpreted as “kuş takası” in Antakya (Demir 1996, 244). There are ten “kuş takası” in the house but this is not the exact number of them due to changes have been done. Two of them located on the wall in-between GF02 and GF03 spaces have been closed from GF02 side and plastered. As a matter of fact, these two windows should be faced directly with courtyard.

2.3.4.2.8. "FANUS TAKASI"

This architectural element is commonly used in traditional Antakya houses, especially on the sold surfaces in-between the openings, for illumination

purpose with a glass shade (fanus) placed inside (Demir 1996, 244). They also used as a worship corner in Christian houses whereas the Muslims used it as a vow place. They generally have an ornamented carved stone finish at the top. There is only one “fanus takası” in the building which is located on the courtyard façade of south-east mass and right in-between the entrance doors of GF01 and GF02 spaces.

Figure 31: “Kuş Takası” on Top, “Fanus Takası” at the Bottom and Ornamented Stone on “Fanus Takası” (author April, 2003)

2.3.4.2.9. WELL

The well is located at the north-west side of the courtyard and it is 1.5m away from the entrances of GF07 space which seems to be a kitchen and GF08 which has been used as a toilet until near future. It has the same distance to wash basin, as well. The workmanship of the stone well is very plain.

Figure 32: The Well in the Courtyard (author April, 2003)

2.3.4.2.10. FIREPLACE

There are two fireplaces in GF07 space. One of them is on the north-west façade and placed approximately 90cm higher from the ground level. The length of the fire place is 1.45m and goes 40cm deep inside of the masonry. It has been spanned with an arched composed of fine cut stone pieces. There is not any trace today which indicates how the flue opens outside. There is just a flue which goes up side. In light of the foregoing, it seems to be a fireplace for ventilation of the room.

The other fire place is located on the south-west façade of the room. It is at ground level and enclosed with a superficially plastered hood. It gets 55cm deep inside of the masonry and the flue goes outside from the south-west elevation at +0.66m level.

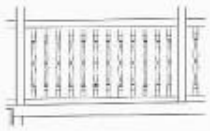
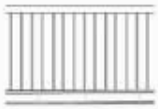
Figure 33: The Fireplace on the North-west Façade of GF07 Space (author April, 2003)

Figure 34: The Fireplace on the South-west Façade of GF07 Space (author April, 2003)

2.3.4.2.11. BALUSTRADES

There are three types of balustrades in the building according to their materials. The first type's handrails and ornamented profiled grills are of timber (TH-TG). In the second type, the handrail is of timber whereas the grills are made of iron bars (TH-IG). The last group consists of the balustrades which has iron handrail with ornamented iron grills (IH-IG). All of them are 88cm in height.

Table 6: Architectural Elements - Balustrades

ARCHITECTURAL ELEMENTS - BALUSTRADES		
MATERIAL	ELEVATION	CODE
TIMBER HANDRAIL with TIMBER GRILLS TH-TG		TH-TG
TIMBER HANDRAIL with IRON GRILLS TH-IG		TH-IG
IRON HANDRAIL with IRON GRILLS IH-IG		IH-IG

2.3.4.2.12. GRILLS

All of the exterior windows of ground floor which are faced with surrounding streets have grills. They are simple iron bars composed of vertical and horizontal components. The vertical bars are passing into three horizontals. There are two windows on the courtyard façade of GF05 space with balustrades. One of them have only horizontal iron bars and the other is just an addition which completely strange with its dimensions in comparison to the opening and with its details.

2.3.4.2.13. SILLS

There is only one type of window sill in the building. It is made of fine cut profiled stone. The ground floor windows located at the north-east façade of the building have these sills. In addition, all street windows of south-east mass have profiled sills. The rectangular courtyard windows of GF01 space have same sills, either. The profiles of the window sills are very similar with the profiled steps of double flight staircase in the courtyard. However, the workmanship of the stone frame of courtyard entrance is alike the sills.

2.3.4.3. FINISHING ELEMENTS

The classification of finishing element carried out according to the location of the material. So, the groups have been occurred as wall finishes, floor finishes, ceiling finishes and roof finishes.

2.3.4.3.1. WALL FINISHES

To a large extent, the walls of the building have been plastered. In addition, some surfaces have been finished with jointing. There are three types of plasters observed on the surfaces as lime plasters, mud plasters and cement plasters.

The most common used material is lime plaster. It has been used as two layers. The first layer has 2-3cm thickness and bigger aggregates; the finishing is with fine layer of lime plaster which includes small pieces of aggregates. The finishing layer is also applied with steel trowel finish technique. Approximately the all timber skeletal wall surfaces have been plastered with lime plaster both from inside and outside. In addition, some parts of the exterior stone walls of north-east and south-east elevations have been lime plastered.

For the interiors, lime-wash has usually been used on the plastered surfaces. The colour of the lime-wash can be white or light blue. Only the GF07 space's interior walls have been painted.

The exterior walls have just been lime plastered by steel trowel finish. Only some small parts of the south-east elevation are lime-washed.

Mud plasters have been used on the ground floor stone wall surfaces of north-west elevation. The surface has steel trowel finish like the other exterior surfaces. GF01 space's interior walls have also been plastered with mud plasters. The finishing has been done with lime-wash.

Some parts of the courtyard wall are cement plastered from both sides. Cement plasters can bee seen on various parts of the surfaces, as well. But it is not in a big amount. They seem like repair materials used in different times.

Finally, the major finishing material used on the north-east façade is penny-struck jointing with lime mortar.

2.3.4.3.2. FLOOR FINISHES

The floor covering materials used in the building can be grouped as stone covering, timber boarding, mosaic tiles, cement topping coat, marble and compacted soil.

Except one of the circulation corridor, all of the first floor spaces and mezzanine-like floor in GF06 and GF07 spaces have timber boarding covers on timber floorings. The width of the timber boarding is standard in 22cm but the lengths are variable.

GF02 space and the circulation corridor located on the first floor of the south-east mass has been covered with mosaic tiles. They have applied on levelling concrete. There are three types of mosaic tiles used in the building. The first type is single cream coloured. The second type is figured tiles with dark grey geometrical shapes onto a cream coloured base. The third one is like the second but the figures are not geometric but circular. The first two types have been used to cover the GF02 space. The last one is at circulation corridor.

Cut stone covering has been used on the courtyard and GF07 space. Stone covers have also been used on the entrances of some of the ground floor spaces.

Marbles in various colours and sizes can be seen on the GF04 space's floor.

GF01 and GF06 spaces have compacted soil finishes. GF03 and GF05 spaces have been covered with cement topping coat.

2.3.4.3.3. CEILING FINISHES

There are six spaces which have covered ceilings in the building. Five of them are located on the ground floor and the one of the space is on first floor. The other rooms either have no cover or the covers have been lost.

GF01 and GF02 spaces have almost the same characteristics but the entire ceiling surface has been covered with nylon in GF02 space. There is a big profiled timber primary beam in the middle of the GF01 space. It lies from north-east wall to south-west walls. There are fine cut timber beams in-between the walls and the primary beam. Those beams are today open but they might

reasonable be covered if the traces is taken into account. There is a timber board which cycles both walls and the primary beam that divides the ceiling into two. It seems that there might be covering board on the secondary beams as an extension of the frame board.

The ground floor spaces of the north-east mass has pure timber ceiling coverings. Each space has timber board coverings with profiled cover fillets. The width of the boards is 18cm and the laths are 2.5cm.

The ceilings of the GF06, GF07 and GF08 are uncovered. The timber floorings of the first floor are out from the ground.

FF07 space at the upper floor has a panelled ceiling (tekne tavan). The curved parts are of lime plastered and lime-washed wood-laths, and the rest is timber with profiled corner fillets. There is a “göbek” in the middle of the ceiling which is made of carved timber.

FF01, FF02 and FF06 have timber ceiling coverings but they have been lost. There is no clear information about the ceiling covers but some small traces especially at the corners.

There is not any indicator that shows existence of ceiling covers for FF03, FF04 and FF05 spaces.

2.3.4.3.4. ROOF FINISHES

The entire roof of the building is covered with traditional roof tiles. They have been inclined parallel with the slope of the roof surface. They have been used on the timber roof boards nailed onto rafters. On the other hand, at some parts, the zinc valleys of the roof have been repaired with tin pieces. At the south-west edge of the roof of south-east mass, there is a completion which has been done by using zinc panels instead of traditional roof tiles.

2.3.4.4. CONSTRUCTION MATERIALS AND TECHNIQUES

There are two main types of construction techniques have been used in the building. One of them is masonry constructions which includes especially the vertical elements such as stone and brick walls. The other technique is frame construction which has been used to build frame walls, floors, ceilings and roof.

2.3.4.4.1. MASONRY CONSTRUCTION

Masonry constructions in the building are studied under two headings. Stone masonry includes all cut, fine cut and rubble stone walls. Brick masonry is also examined as another heading even it has a very limited use in the building.

2.3.4.4.1.1. STONE MASONRY

Stone masonry construction technique is widely used in the building. The vast majority of the ground floor walls are stone walls. All of the surrounding walls at ground floor, the first floor walls of the north-east elevation, and the first floor walls of south-east mass on both south-west and south-east faces and ground floor walls of north-west and south-east masses on the courtyard are stone walls.

There are three types of stone masonry in the building such as masonry with fine cut stone, masonry with cut stone and masonry with rubble stone.

Fine cut stones are widely used particularly at the corners of the surrounding walls, around the openings and entire courtyard façades of north-west and south-east masses. In all circumstances, lime mortar has been used as binding material. Even if it has already been plastered and not easily be observed, the hood of the fireplace in GF07 space has been built by using this technique. In addition, the other fireplace in the some room has been spanned with an arched constructed with the fine cut stone elements.

Use of cut stone in masonry is common at the areas which is in-between the fine cut stone works at the corners of exterior walls. However, the inner surfaces of the stone walls have been constructed with them and they all plastered. The outer parts are plastered in some parts. The north-east elevation of north-east mass has lime mortar jointing on the cut stone masonry. The timber bonds have also been used in the cut stone masonry but it is not a frequent encounter.

Rubble stone masonry has rarely seen in the building. In some parts of the courtyard wall and the wall under the double flight stair have rubble stones. They are most probably the further partial repairs have been done after damages caused by earthquakes…etc. In addition, rubble stone masonry technique can be seen at the upper parts of cut stone walls. They have been used right under the roof structure as thin strips and transmit the roof's load to cut stone masonry. In some cases, they have only been used to fill the gaps between roof and the masonry. The triangular area between the FF06 and FF07 spaces is of rubble stone, as well.

2.3.4.4.1.2. BRICK MASONRY

Brick masonry is another masonry technique observed in the building. The type of brick used in the building is solid baked-bricks 9X19X5cm in dimensions. Similar with the rubble stone masonry, they have seen on some parts of the courtyard wall, the wall under the double flight stair as further repairs. Moreover, this technique has been used around the first floor's window openings of the south-east mass at north-east façade. On the south-east elevation, the area in-between the openings of both ground and first floor of south-east mass has been constructed with brick masonry technique. This part extends in the courtyard wall up to the timber post which carries the roof. The depressed arches of the GF01 space are made of brick from inside. The back walls of the cupboards located in FF01 space is of brick. At this point, the question came to mind is wonder if those cupboards were windows at the beginning and they had been closed after the adjacent building was built.

2.3.4.4.2 FRAME (SKELETON) CONSTRUCTION

The frame construction technique is another main type of technique which has been widely used in the building. This technique includes the vertical elements (walls and posts), horizontal elements (floors, ceilings and beams which combine the posts) and the roof construction

2.3.4.4.2.1. VERTICAL ELEMENTS CONSTRUCTED WITH FRAME CONSTRUCTION TECHNIQUE

The vast majority of the walls located at the first floor and the walls in-between the spaces on ground floor have been constructed with this technique.

In this building, almost all of the walls constructed with frame technique have not only built to separate the spaces but also carry the load of upper floors, walls and the roof. The walls consist of timber posts which are 10cm by 10cm or 10cm by 5cm in dimension and timber beams which are 10cm by 10cm in dimension as primary elements. There diagonal elements and small secondary supports which are 10cm by 5cm in dimension have been used, as well.

The gaps exist among these primary and secondary elements have been filled with rubble stone pieces with either lime or mud mortars. Even if it was known that the walls covered with wood lath generally not have infill material, the walls in the building covered with wood lath have been filled with rubble stone pieces with or without mortar, either.

However, the timber posts especially located at the first floor's semi open spaces constructed with the same technique and distribute the dead load of roof to both stone and timber frame walls of ground floor.

2.3.4.4.2.2. HORIZONTAL ELEMENTS CONSTRUCTED WITH FRAME CONSTRUCTION TECHNIQUE

All of the floors except the floors resting on ground have been constructed with this technique. They have also been used to fix the ceiling coverings of the spaces located at the ground floor.

The floors of FF01 and FF02 spaces at South-east mass have primary thick timber beams which extend in the middle of the rooms from one short wall to the other. The secondary timber beams have been put on these primaries and the other timber beams on long walls at both sides in opposite direction. Then, the floor boards have been nailed onto the secondary beams.

The floors of FF03, FF04 and FF05 spaces located at the North-east mass constructed on the beams of the timber frame walls and the other timber beams placed on the stone walls of North-west and South-east mass. The secondary beams which are 10cm by 5cm in dimension have been put on these primaries and they extend from South-west to North-east. The finishing is constructed with timber flooring nailed onto the secondary timber beams. The floors have been covered with timber boards with wooden laths from the bottom as ceilings of GF03, GF04 and GF05 spaces.

At the North-west mass, the floors of FF06 and FF07 spaces have timber frame floors constructed on primary timber beams, timber frame wall in-between GF06 and GF07 spaces and stone masonry on both sides, the secondary timber beams which are 10cm bt 5cm in dimension have been placed in South-west to North-east direction. The floor boarding has been nailed onto these secondary beams. There is no ceiling cover at the top of GF06 and GF07 spaces. However, there are two mezzanine-like floors in both rooms. They have been built with the same construction technique. There are two thick timber beams for each floor extends from South-east to North-west and they go inside

of the stone masonry on both sides. The secondary beams have been placed at the opposite side and the floor boards have been nailed onto them.

Furthermore, the beams which combine the post at the first floor have been studied as horizontal elements constructed with frame construction technique.

2.3.4.4.2.3 ROOF CONSTRUCTION

There are three separate roofs on three masses of the building and all of them have been built with timber frame construction technique. All the roofs are pitched. The north-east has a gable roof which has two slope directions. Other two masses have hip roofs that consist of three slopes in different directions.

The timber skeletal walls, the frames built up with timber posts and beams and the stone masonry especially at the outer parts carry the roof structure. At some parts, the timber studs have been used for carrying the purlins of the roof. The rafters have been nailed onto the purlins. Particularly, at the edges towards the streets, the rafters directly sit on the stone masonry. Eave purlins and bearing plates have rarely been used to support the other elements. Each roof has three purlins. One of them is located in the middle of the roof structures and the others are on both sides. The rafters are nailed onto them with 20cm spacing. There fine cut timber and log ridge purlins. In FF06 space, a hanger-like stud has been used to support the roof in-between the ridge purlin and the log in the middle of the room.

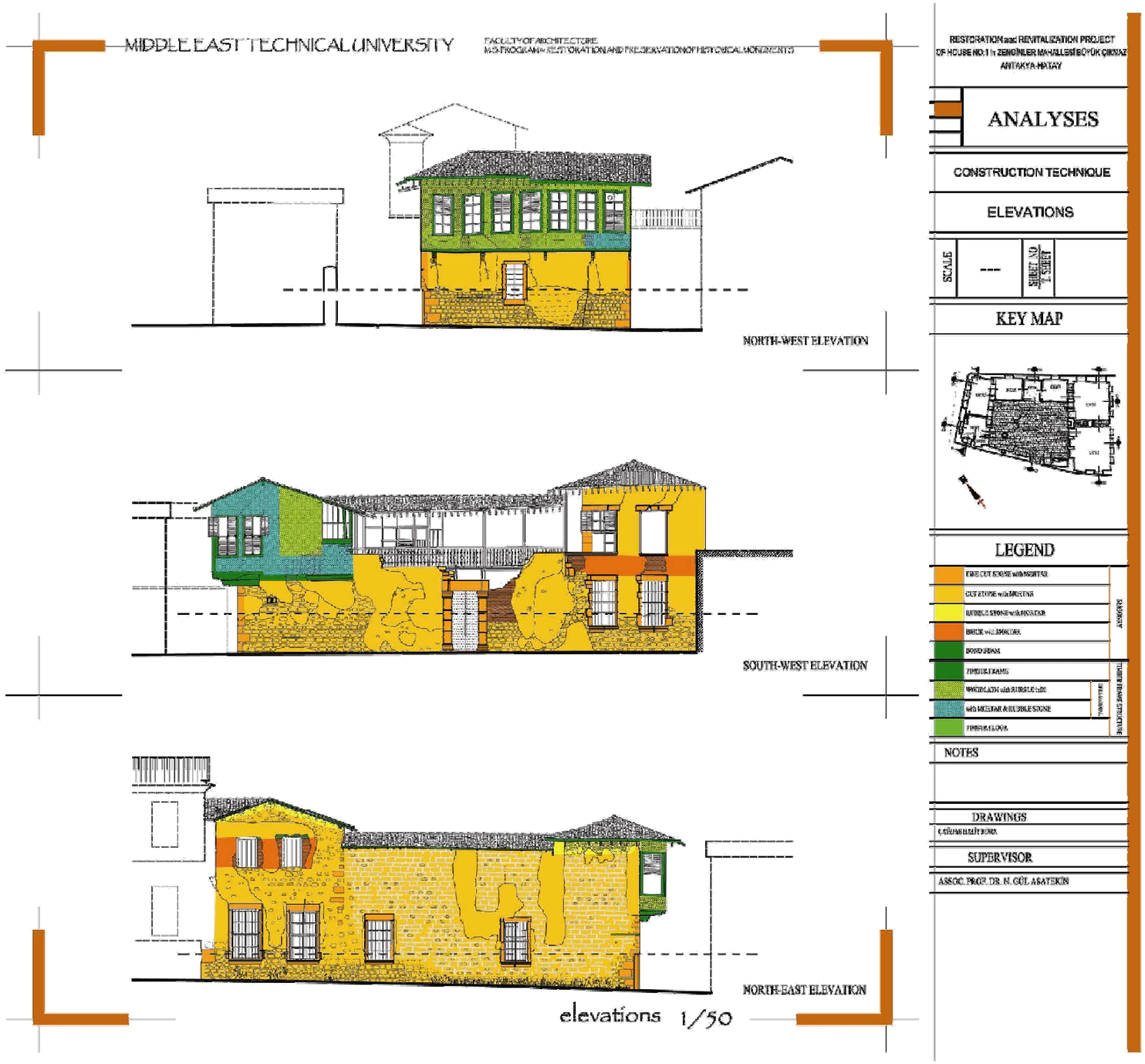


Illustration 27: Construction Technique - Elevation

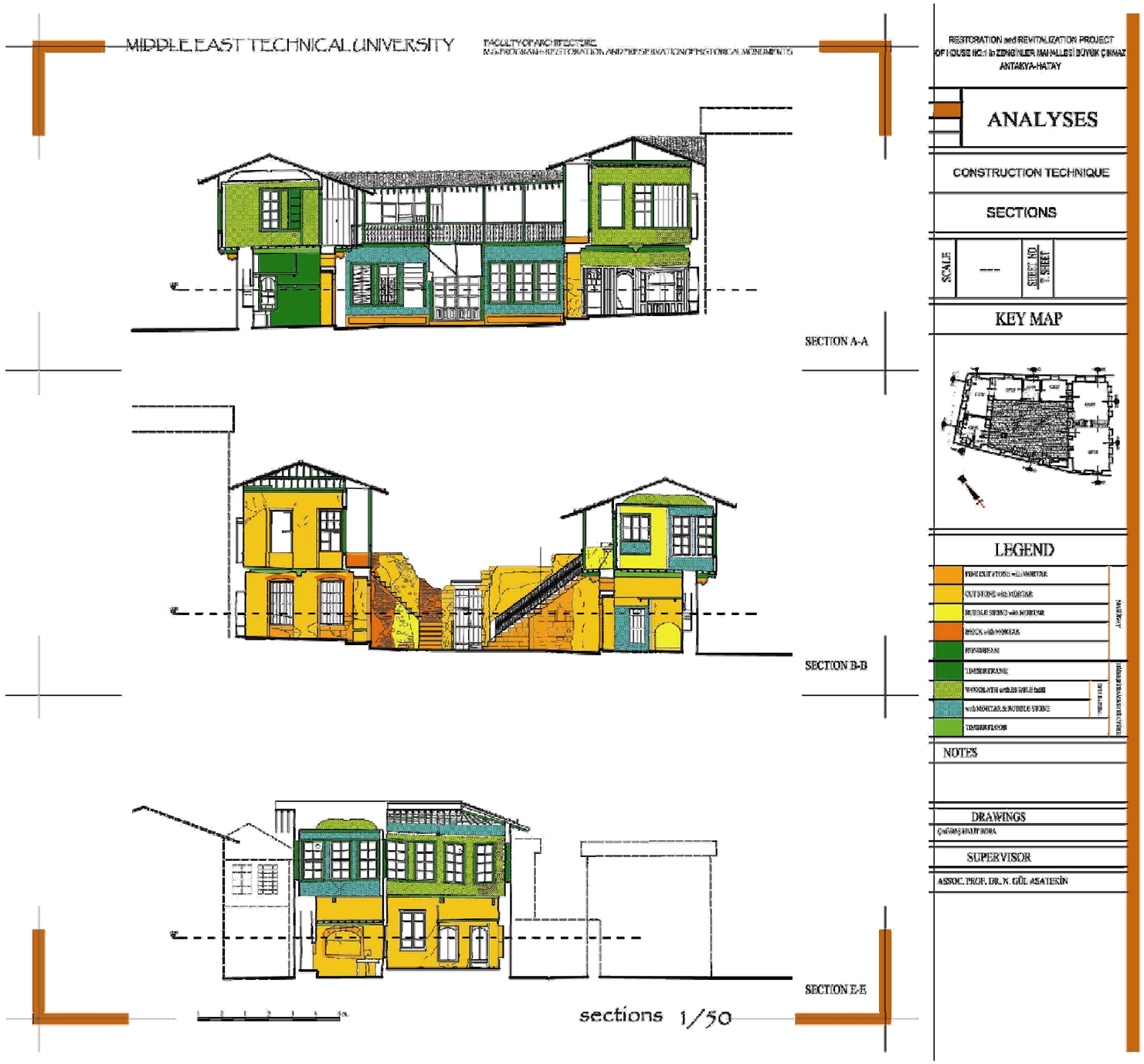


Illustration 28: Construction Technique – Sections 1

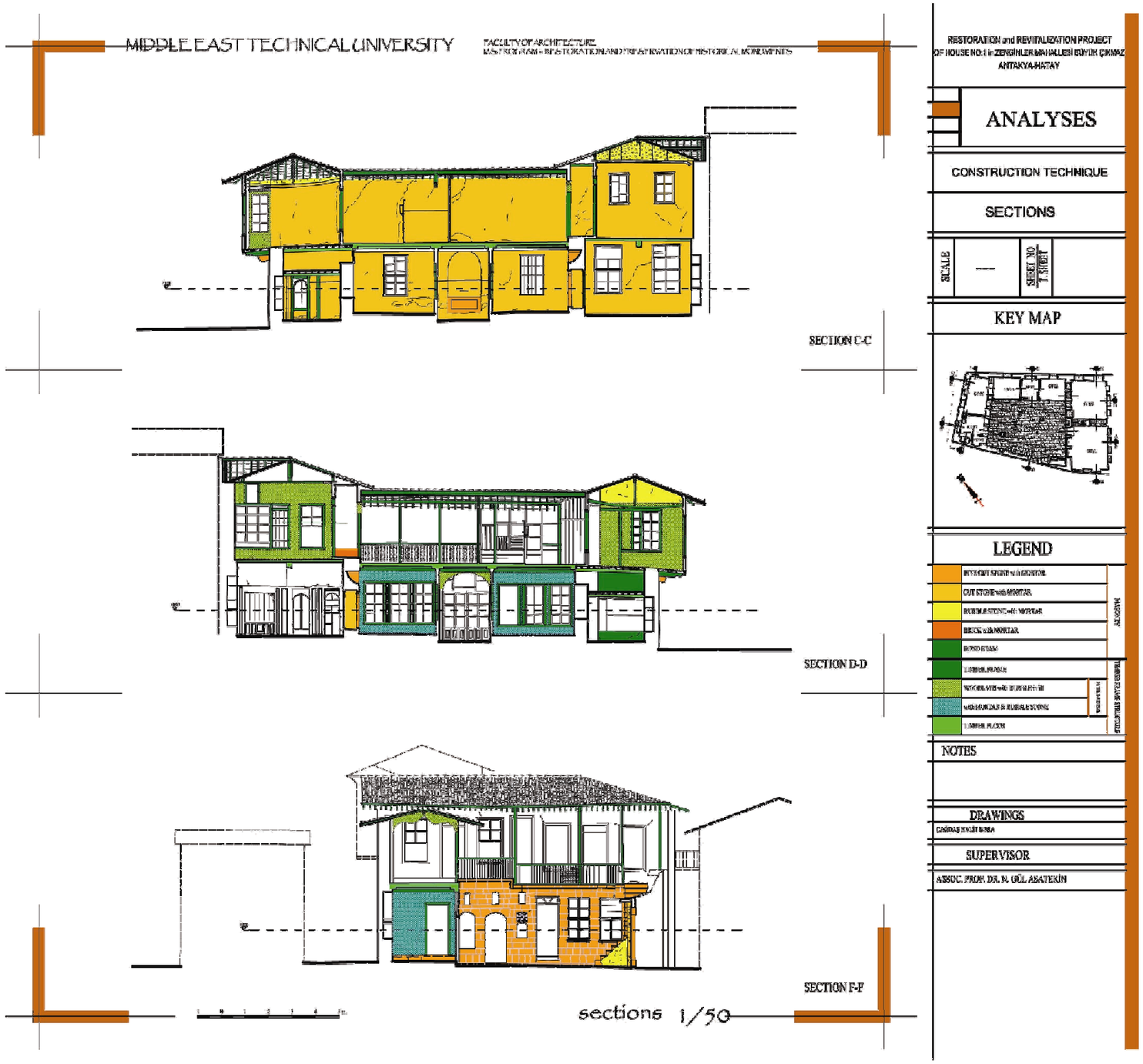


Illustration 29: Construction Technique – Sections 2

2.3.4.5. STRUCTURAL SYSTEM

The structural systems observed have been presented by system sections taken from different parts of the building. In addition, a mapping has been prepared on floor plans to determine and associate the construction techniques and the structural systems used in the building.

There are three types of structural systems have been used in the building which are load bearing, skeleton and arcuated. Stone and brick masonry walls composed load bearing system, timber skeletal walls and floors are the components of frame (skeleton), and the transition elements especially above the openings in the masonry consist arcuated systems.

Approximately, all of the walls located on the ground floor have been designed according to the load bearing systems principles. The partition walls in-between the spaces and the south west wall of the north east mass have been constructed according to frame system principles. All of the floors in the building are in frame system constructed with simple support principles. The walls on first floor are of timber frame up to roof construction built up timber frame structure. There are two surrounding load bearing walls at north east and south east side of the building at first floor and they directly carry the loads transferred from the roof.

The system sections taken from six different points of the building present how these three systems have been combined.

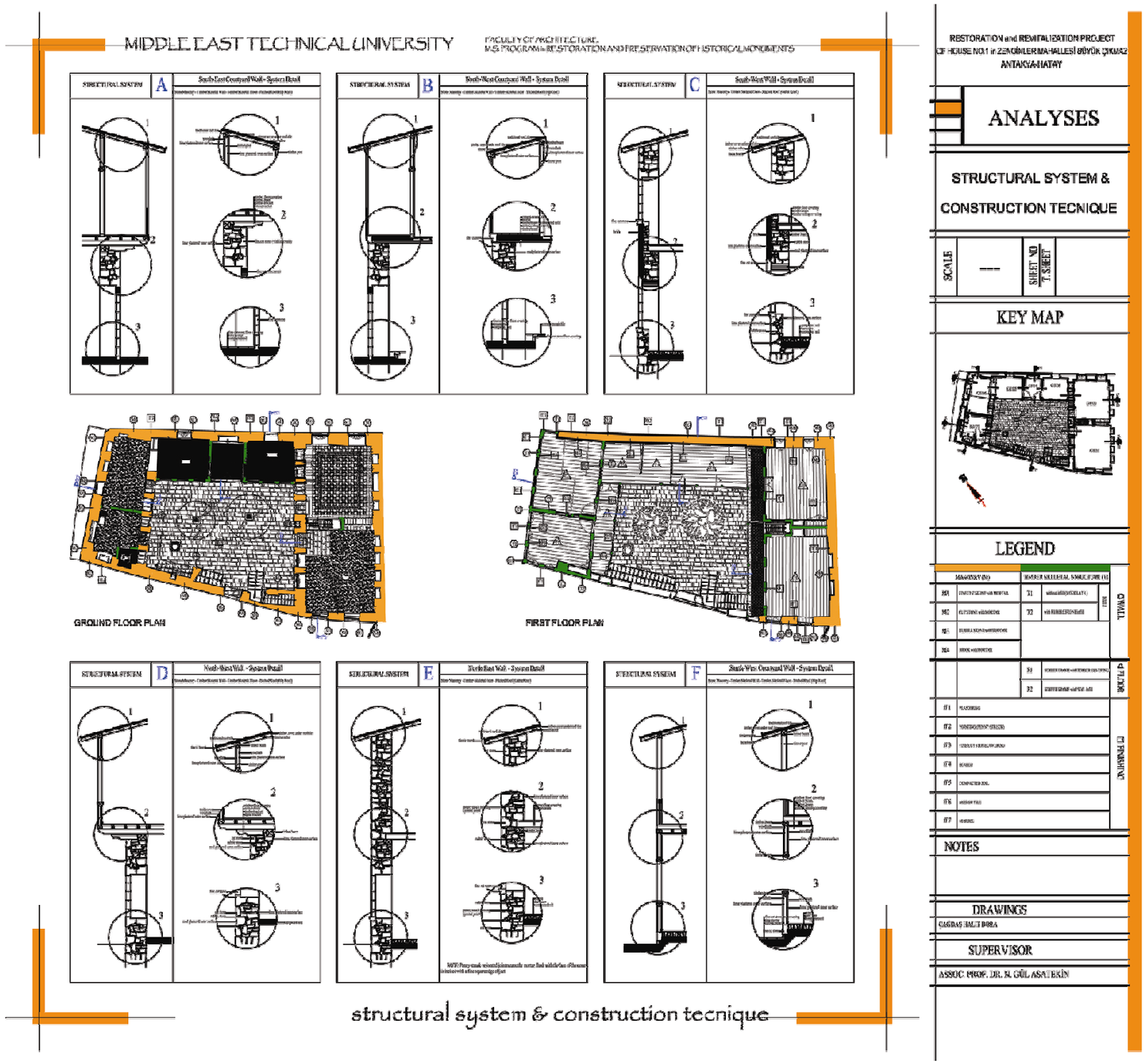


Illustration 30: Structural System

- **System Section A**

The wall resting on the ground is of cut stone and the opening on this wall has been spanned with an arch. The timber floor's projection has been supported at the connection point with the stone masonry with a bracket which has two components; one of them is fine cut stone and the timber above it. There are two timber frame walls at the second floor and both two walls distribute their loads to the load bearing below. The timber wall inside has been sit directly on the stone wall and the outer one sits at the edge of the timber bracket. These two timber frame walls carry the loads comes from the timber frame hip roof. All of the elements of frame structure have been designed as simple supports consist of post and beams. The inner wall has been covered with wooden laths and plastered.

- **System Section B**

In this section, the wall on ground is of fine cut stone and the opening on the wall has been spanned with an arch. The timber frame floor structure directly carried by the stone wall below and it has been filled with compacted soil for mosaic tile covering at the circulation corridor. There are two timber frame wall structure on the top of the floor. The outer frame sits on the stone wall and it defines the border of the circulation corridor. The inner one distributes its loads to the stone wall via timber floor. It has been covered by wood laths. These two vertical timber frame structures carry the loads come from the timber hip roof and transfer it to the stone masonry.

- **System Section C**

The whole section consists of masonry structure. The opening on the ground has been spanned with an arch at the top. Being different from the others, this arch has been built up with bricks on the inner side. On the other hand, the outer part is of cut stone and fine cut stone lintels have been used to carry the load above. Up to the opening on the first floor, the outer part of the wall has

been constructed with bricks where as the inner side is of stone. The window opening has been spanned by using fine cut stone lintels. The timber gable roof construction distributes its loads directly to this composite masonry.

- **System Section D**

The wall on the ground is of stone and the window opening has been spanned with a fine cut stone lintel on the top. There is a bracket which has two components – one of them is of stone and the other one is timber – at the connection between the stone wall and the timber frame wall at the first floor. The bracket distributes the load of the projection to the masonry. The hip roof structure sits on the timber frame wall.

- **System Section E**

The wall is of stone from ground up to timber roof structure. The window on the ground floor has been spanned with fine cut stone lintel. The beams of the timber floor have been inserted into the masonry. Hip roof construction on the top transfers its load directly to the wall below.

- **System Section F**

The entire section consists of timber frame elements on both floors. The timber frame floor and the timber frame hip roof at the top gives their load to the ground via these timber frame walls.

Table 7: Structural system – Type A

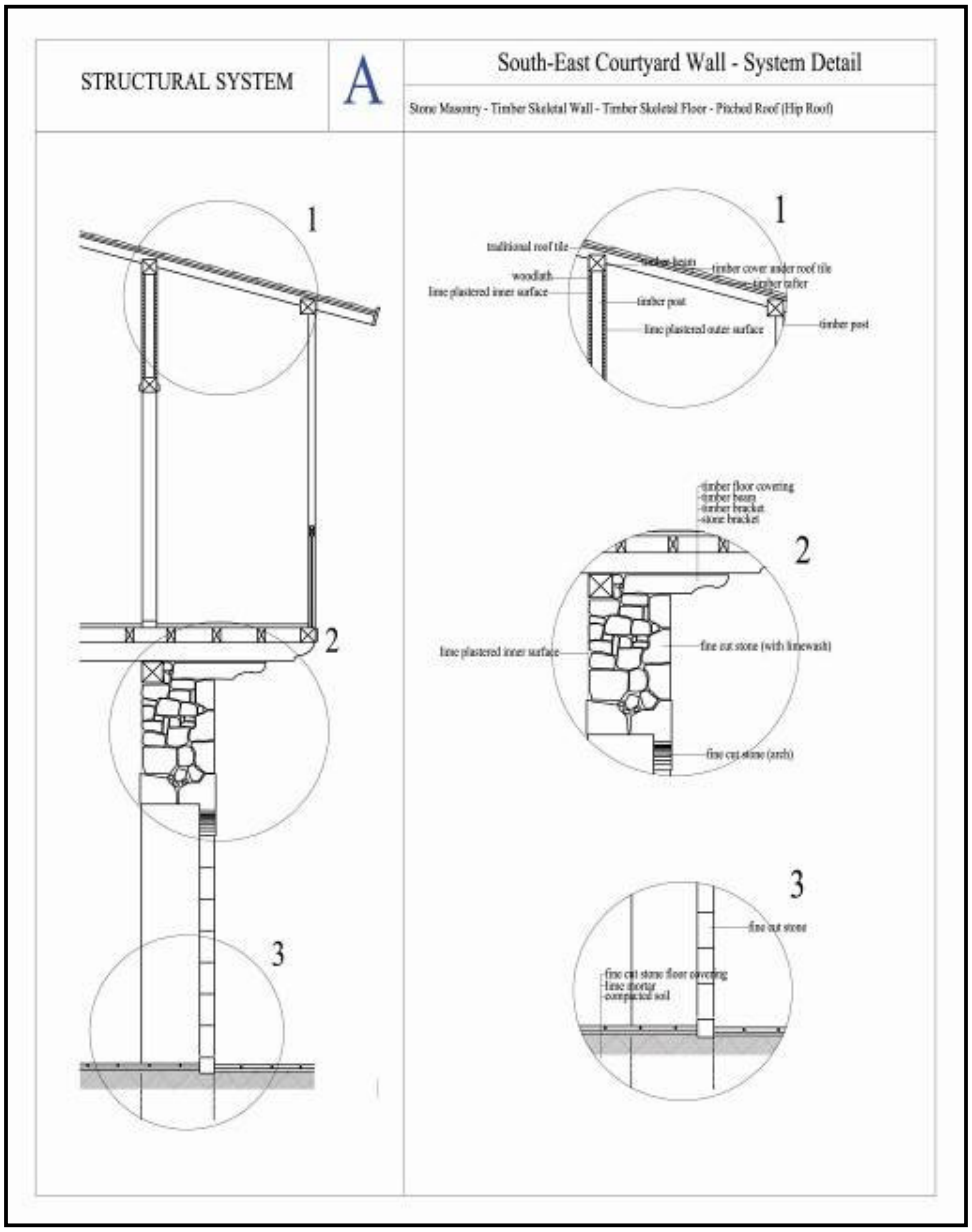


Table 8: Structural system – Type B

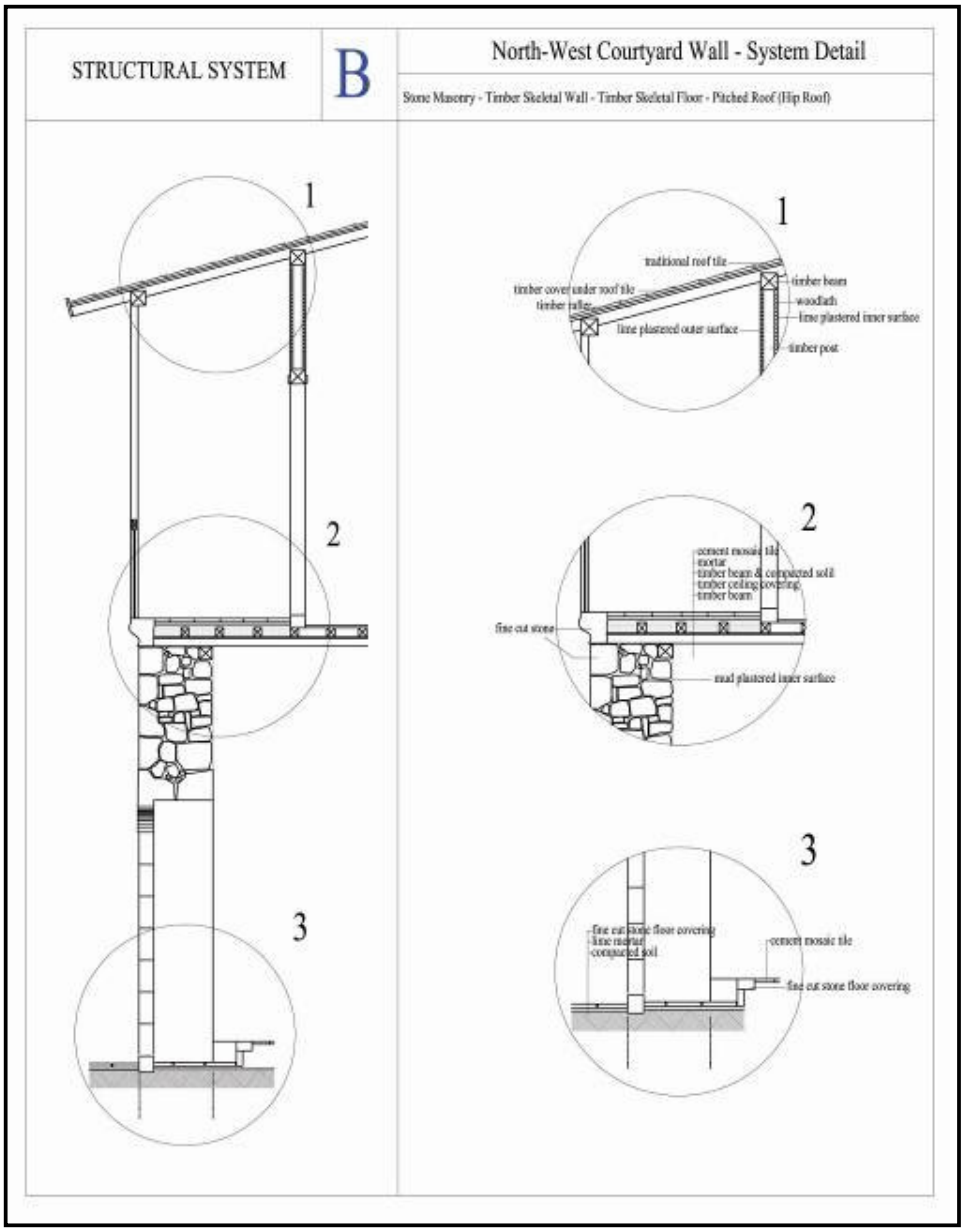


Table 9: Structural system – Type C

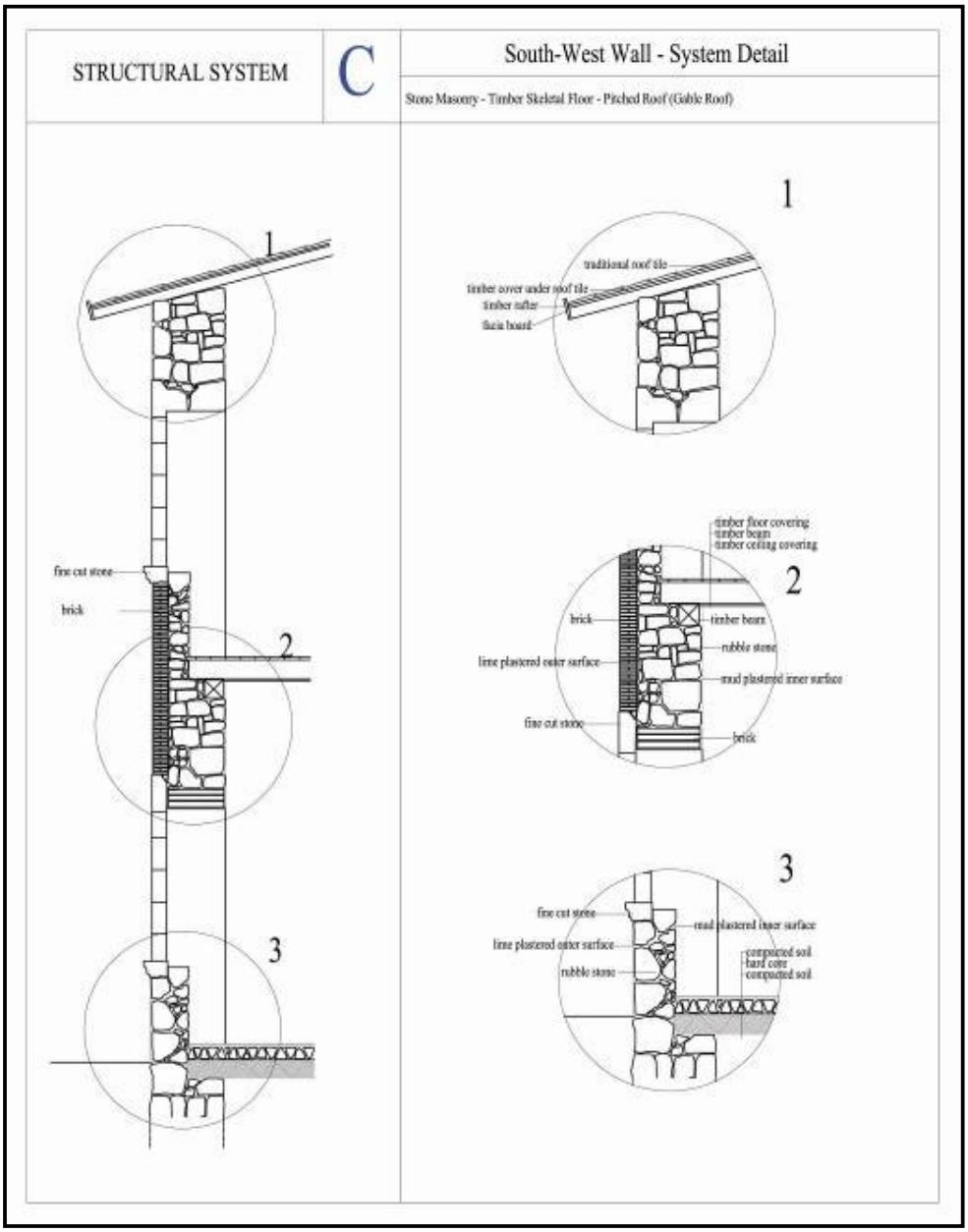


Table 10: Structural system – Type D

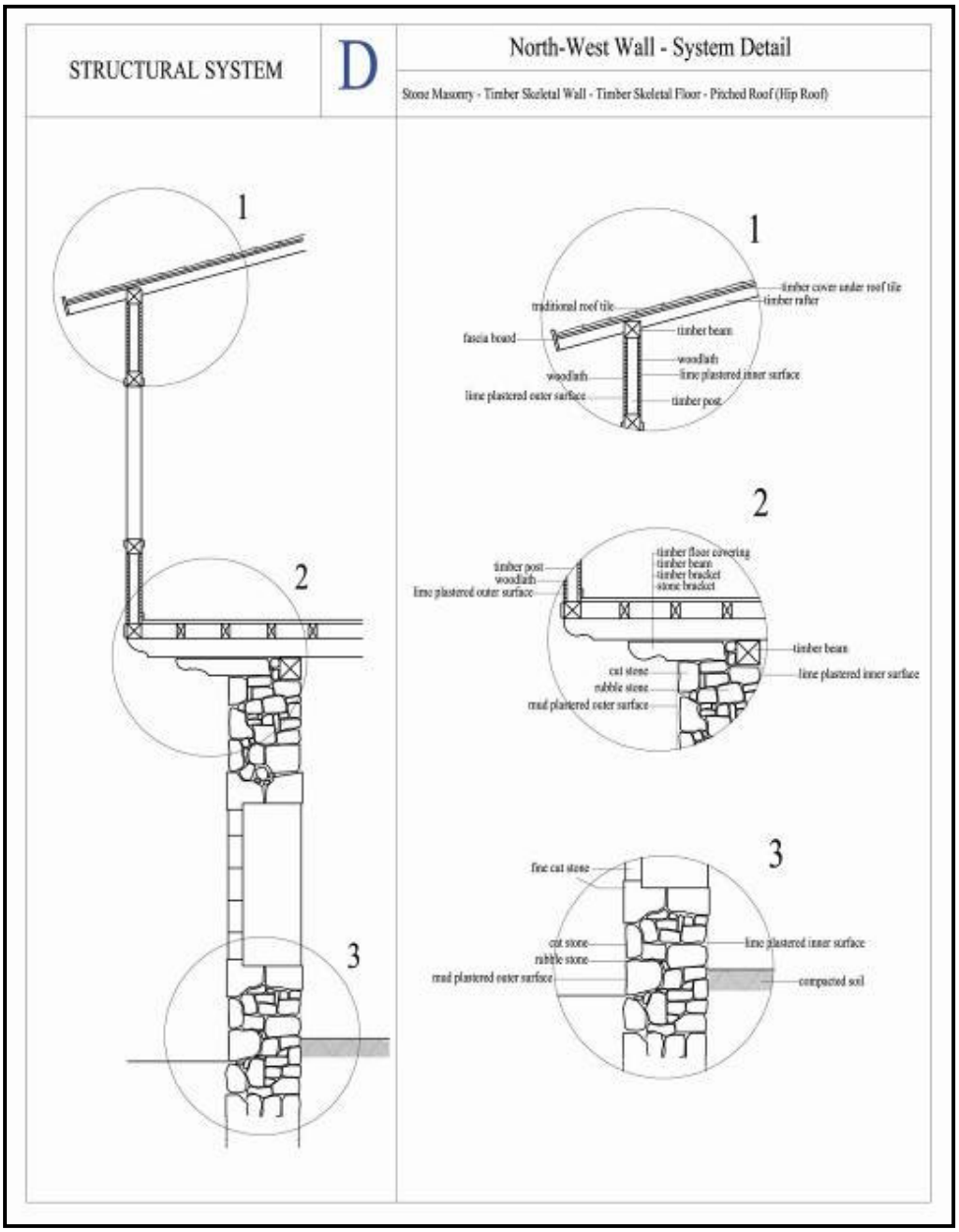


Table 11 : Structural system – Type E

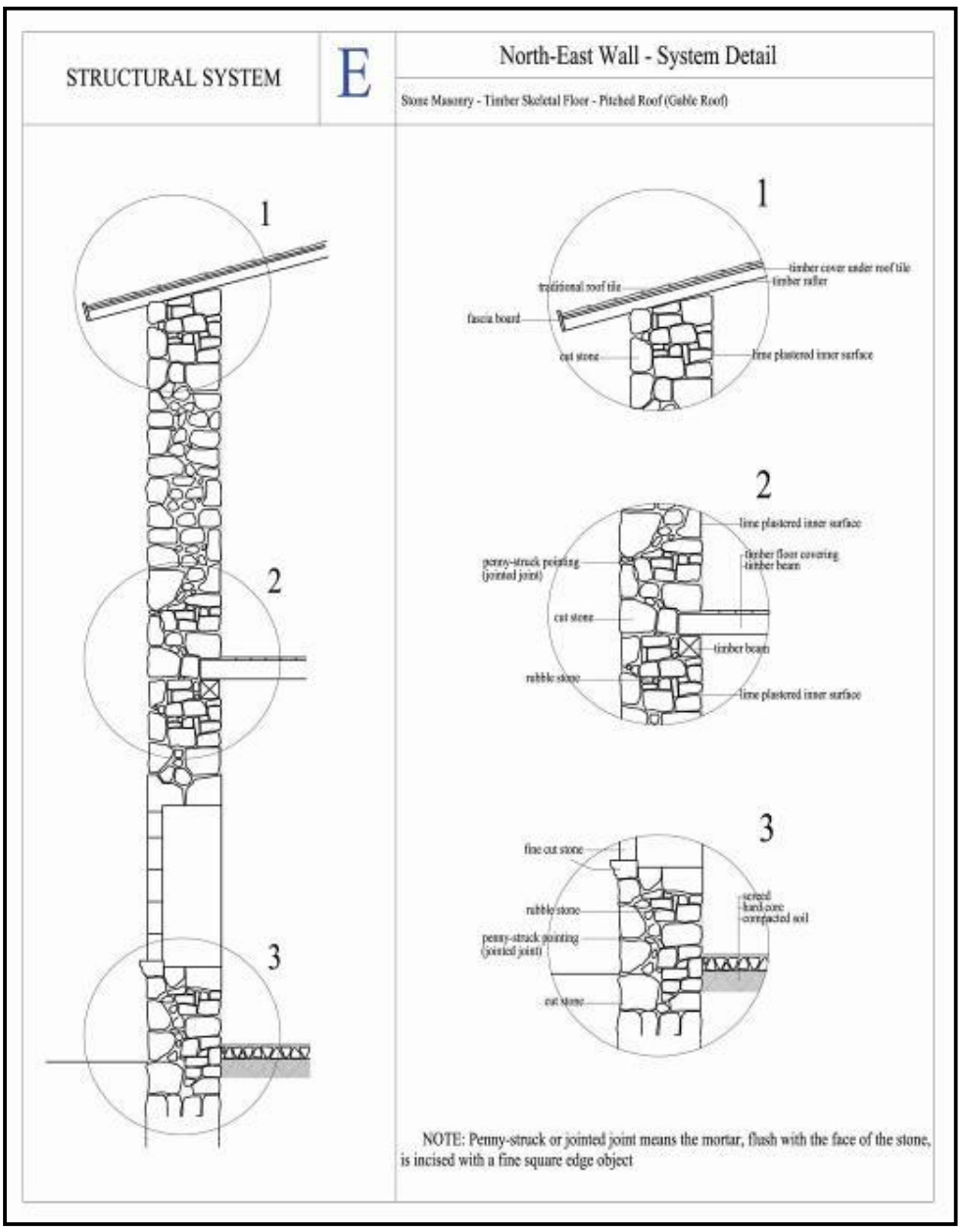
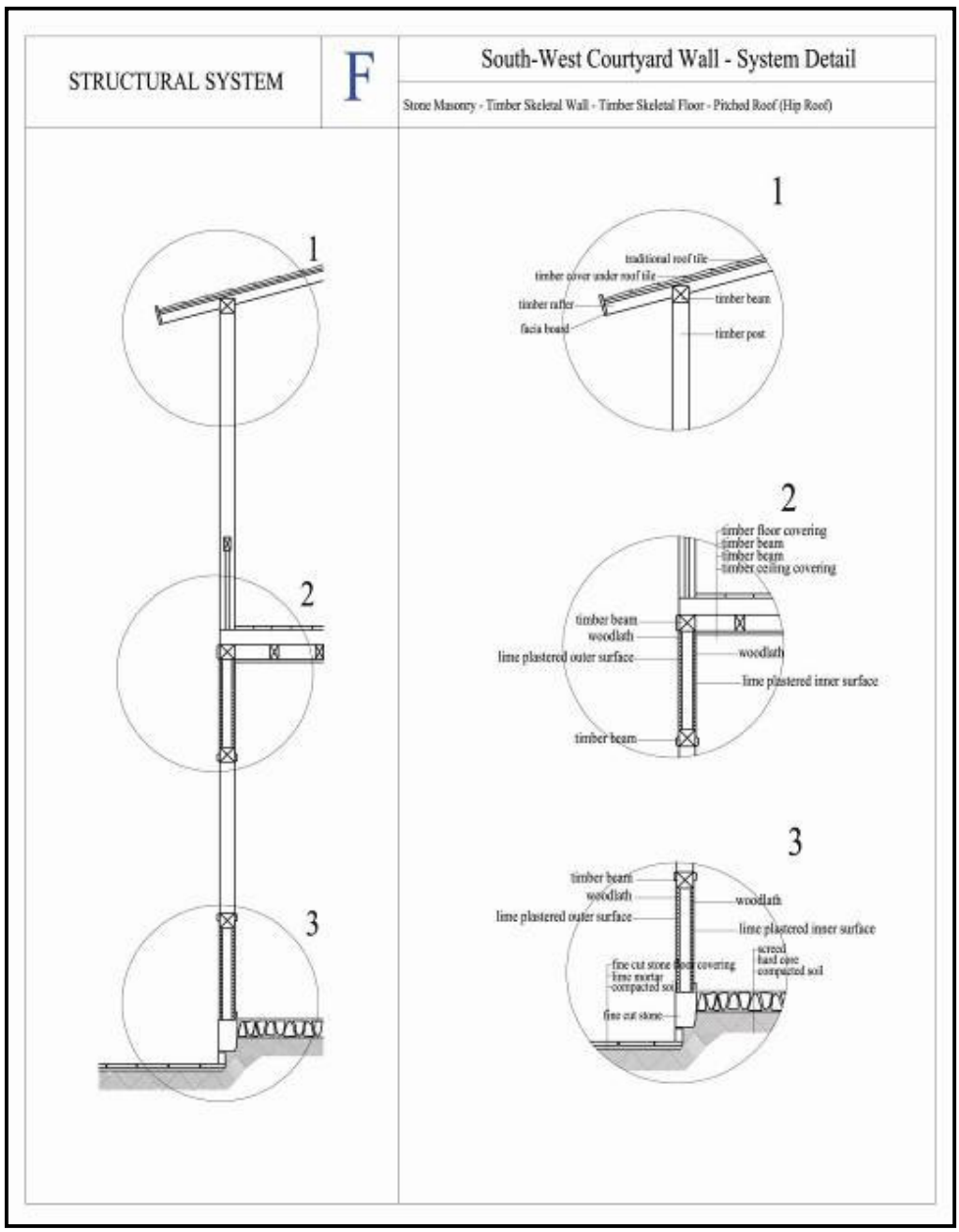


Table 12: Structural system – Type F



2.3.4.6. CONDITION OF MATERIALS AND STRUCTURAL DEFECTS

The diagnosis of deteriorations and structural deformations on the building is based on the visual analyses which have been done during the site survey. The survey drawings have been mapped according to these analyses and the intensity and distribution of the weathering forms have been presented.

2.3.4.6.1. MATERIAL DETERIORATIONS

According to visual observations, the deteriorations and decays seen on the building materials classified as material loss, capillary cracks, corrosion, detachments and discoloration/deposits. The sub-classifications have been done for detachments as scale, granular disintegration and blind detachments, and for discoloration/deposits as white deposits, dark deposits, colour change and living organisms.

WEATHERING FORMS ON THE MASONRY STRUCTURE

The stone and brick pieces of the masonry are remarkable in good condition if the weathering forms taken into consideration. There are only white and dark deposits observed on the surfaces of these elements. The white deposits – efflorescence[7] (Schaffer 1972, 57) - accumulated on the surfaces due to use of cement based materials for jointing and plastering works. The dark deposits stems from smoke remains. Especially, the upper and the lower parts of the walls have colour change problem due to rain penetration caused by the roof structure and rising damp on ground level. There is no drainage system around the building and the old small channels of the narrow streets have been covered with asphalt.

[7] "The term "efflorescence" is popularly used to describe the apperance of salts on the surface as an external crystallisation…"

WEATHERING FORMS ON THE TIMBER MATERIALS

Similar with the stone and brick elements, timber materials of the building are not in bad condition. Approximately, all the surfaces of wooden elements, especially the ones which are located at the outside of the building have colour change problem caused by the sunlight. The colour of the timber surfaces turn into dark grey due to light catalyzed oxidation (ultra violet oxidation)[8].

White deposits have been seen at some parts of the wooden surfaces inside of the spaces. The organisms like insects and fungi have seldom if ever seen on the wooden materials.

Physical degradation resulting from alternate swelling and shrinkage due to wet-dry process has been observed some of the vertical timber elements.

WEATHERING FORMS ON THE FLOOR COVERINGS

Granular disintegration is the widespread problem for the courtyard's stone coverings which directly affected from the external conditions. The mosses and lichens can easily be seen on some parts of the floor cover and some of the stone steps of the staircases. There are two big trees in the courtyard and the roots of these two occurred big cracks on the stone covering elements. The mosaic tiles of the FF02 space have discolouration problem at the closer parts to the walls of the room.

On the first floor, the timber covers have colour change problem which spreads homogeneously. Material losses can be seen at some specific points on the floor.

[8] If the wood meets with the sunlight permanently, it looses its original colour and seems brownish. However, if it does not only meet with sunlight but also gets wet, it seems grey. These kinds of deteriorations are not harmful. It affects only the appearance of the surface.

WEATHERING FORMS ON THE CEILINGS

Colour change is again a widespread problem on the surfaces of the timber ceilings of the spaces located on the ground floor. In addition, some parts of the space GF01 have white deposits on it comes from the upper floor.

At the first floor, some small portions of the ceiling area have white deposits. The ceiling covers of the space FF01, FF02, FF05 and FF06 have been lost. The rest of the ceiling have colour change problem as the other timber components of the building have.

WEATHERING FORMS ON THE ROOF CONSTRUCTION

Timber roof construction has the similar problems with the other timber parts of the building. All of the rafters, purlins and the timber covers under the roof tiles have colour change problem. Material losses can be seen at the eave edges of the rafters.

WEATHERING FORMS ON THE FINISHING MATERIALS

Detachments and material loss are the common problems for the plasters used in the building. Detachments show itself as scale or granular disintegration on the outer surfaces due to direct touch of rain water. In the inner surfaces, blind detachments are widespread.

Granular disintegration is a common problem for jointing of the masonry walls. Material losses have been observed particularly at the lower levels of the walls. This problem reiterates at the other parts of the walls but it is not as intense as is at the bottom. At the lower parts of the outer walls which have exposed to rising damp problem, the botanical growth can easily be seen. On some parts

of the courtyard wall which looks towards the north, the mosses spread to the jointing.

The roof tiles have been broken or have been lost on the roof structure.

WEATHERING FORMS ON THE ARCHITECTURAL ELEMENTS

The most of the timber windows and the timber ceiling coverings in the building have been lost. Some of the timber shutters and the doors of the cupboards have been lost, as well.

The iron grills and the iron balustrades have corrosion problems due to be exposed directly with the external conditions without any protection materials on them.

Some of the stone brackets and the sills of the windows have broken pieces. The stone brackets also have granular disintegration problem.

2.3.4.6.2. STRUCTURAL DEFECTS

The structural defects in the building classified under the two main headings as vertical and horizontal. The vertical defects have been defined as cracking, leaning, local bearing failure and collapse. The horizontal defects have been gathered under the same sub-titles but sagging has been used instead of leaning.

Structural crack have been seen on the stone surfaces of the masonry particularly on the top of the openings. They generally are toothed cracks on the fine cut stone surfaces.

One of the timber posts on the first floor of north east mass leaned from its plumb-line.

Sagging and local bearing failures are common problems at the edges of the projections of the first floor of the building.

Some parts of the courtyard wall at south west and the roof structure have partially collapsed.

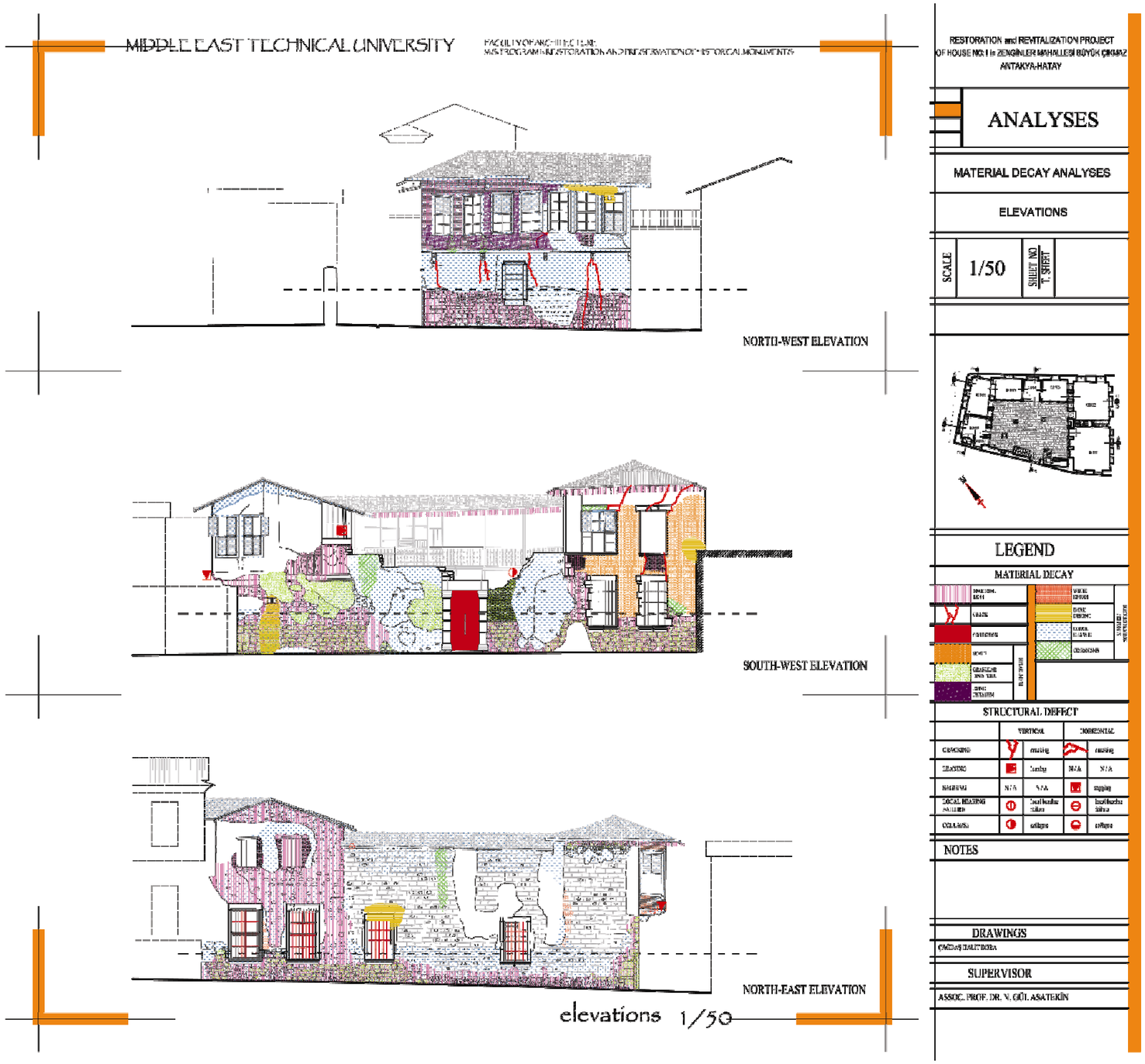


Illustration 31: Material Decay Analyses - Elevations

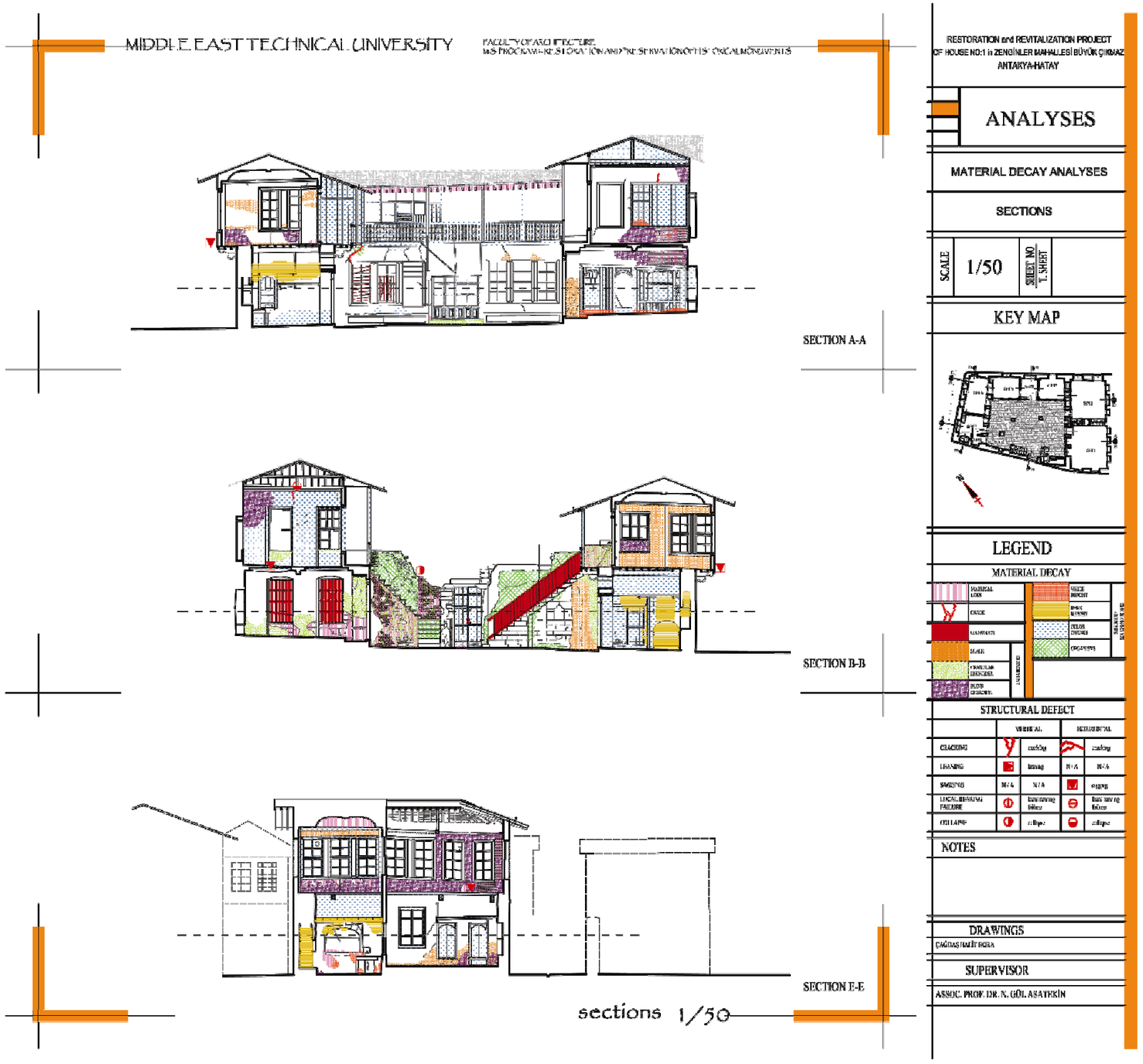


Illustration 32: Material Decay Analyses – Sections 1

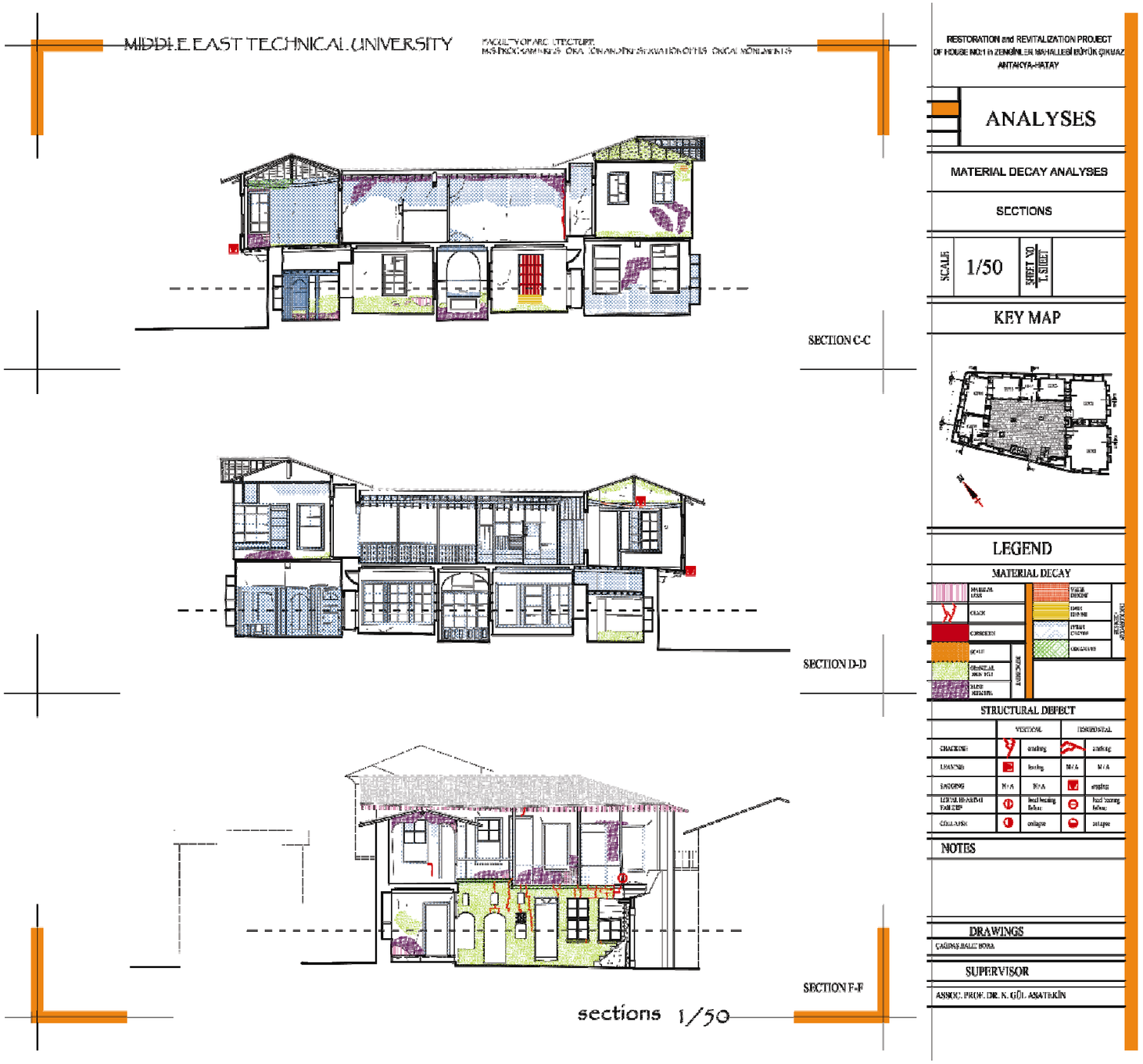


Illustration 33: Material Decay Analyses – Sections 2

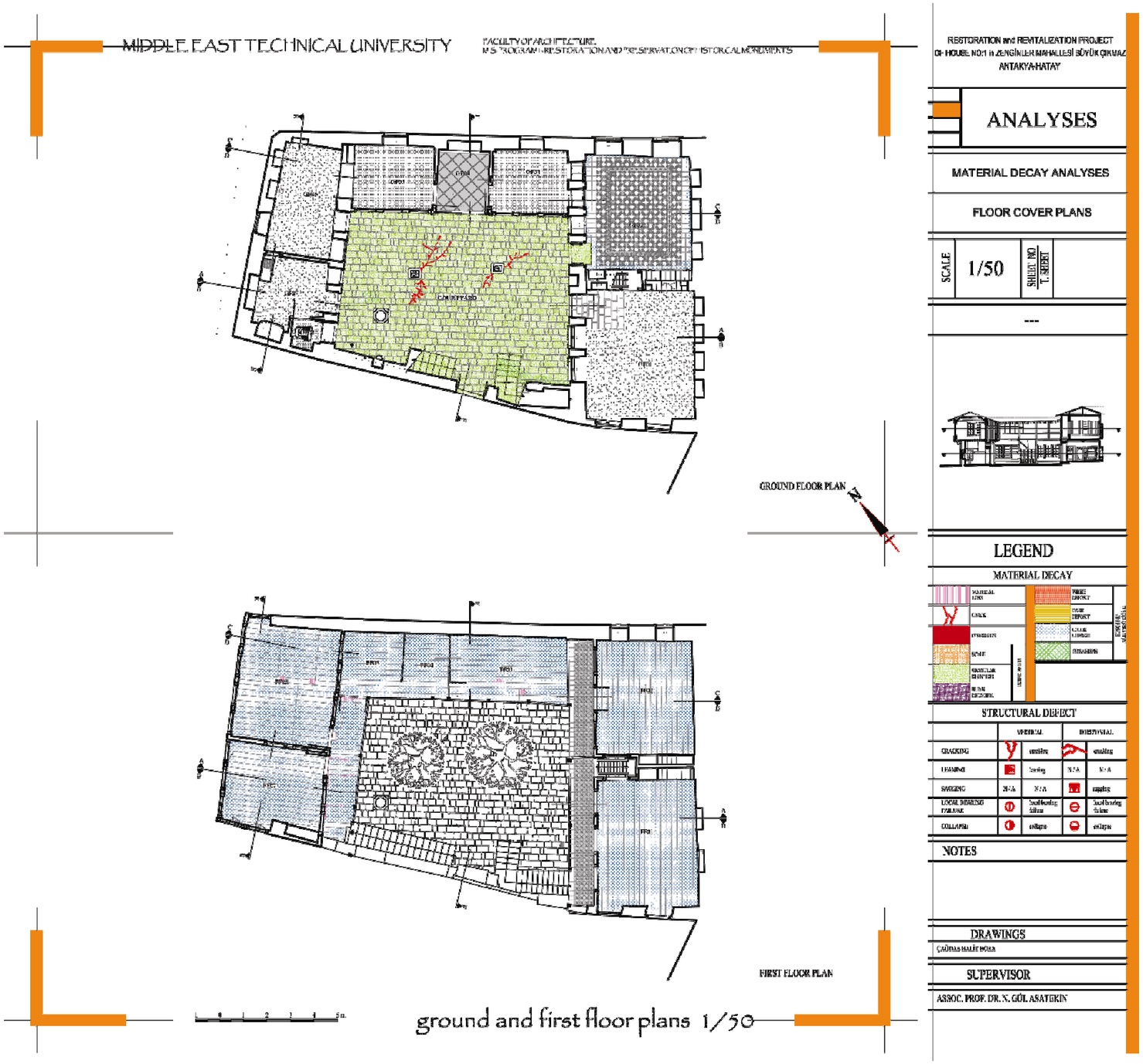


Illustration 34: Material Decay Analyses – Floor Cover Plans

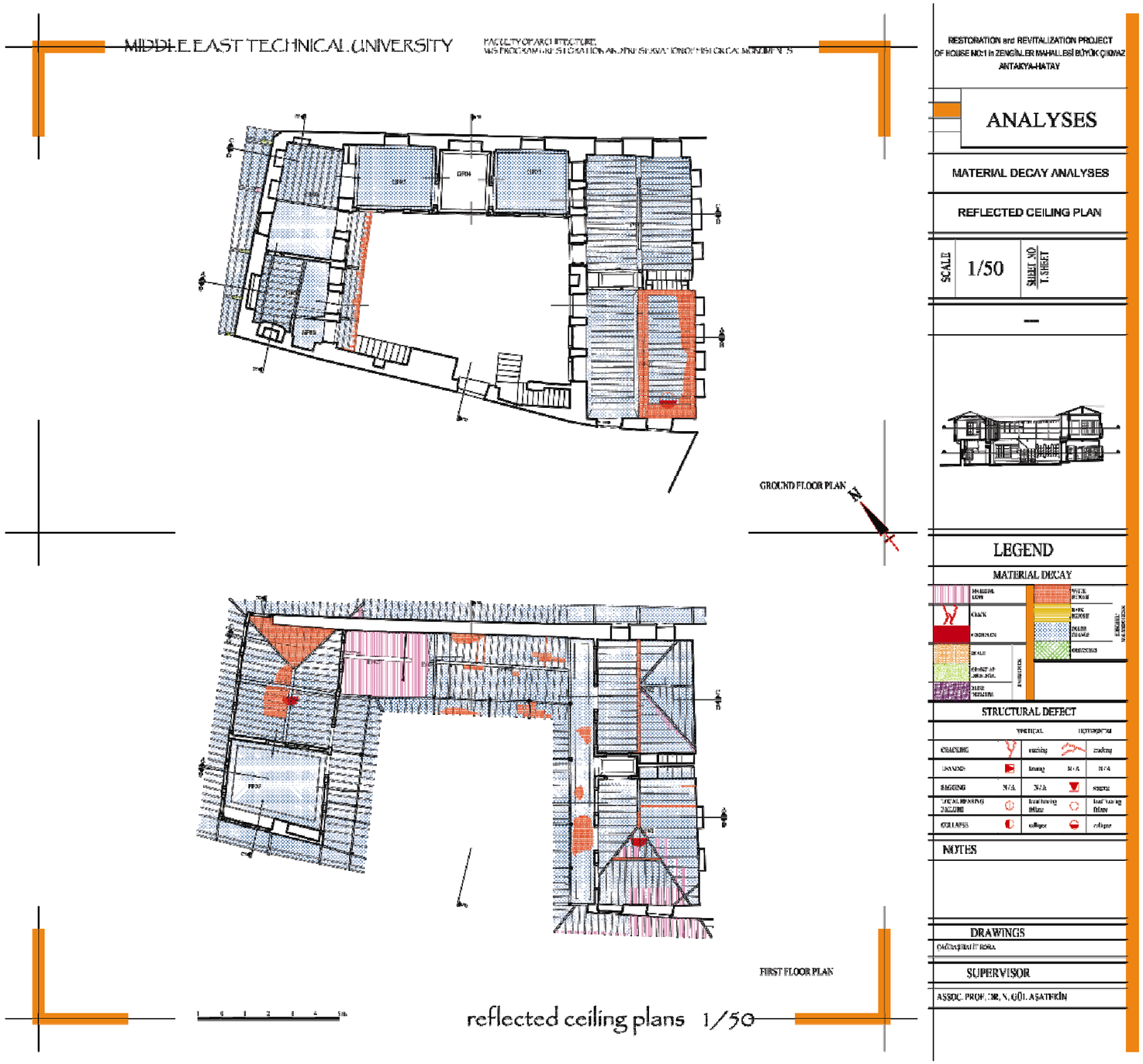


Illustration 35: Material Decay Analyses – Reflected Ceiling Plans

2.4. CHANGES IN THE BUILDING AND COMPARATIVE STUDY

2.4.1. CHANGES IN THE BUILDING

The changes in the building have been examined in order to analyse the history of the building from its original state to present situation. Within this scope, the changes which have been seen in the building categorised according to the headings; alterations, additions and removals/missing elements.

The analyses on changes in the building have been based on the indicators such as traces on the building, partially existing elements or its remains, use of inadequate materials or techniques and etc. The indicators have also been supported with the documents obtained by the historical research, literature survey, and the materials of comparative study.

2.4.1.1. ALTERATIONS IN THE BUILDING

Change: The cupboard on the north east wall of GF05 space is an alteration.
Evidence: The peculiar details and inadequate connections of the cupboard placed on the stone masonry separated from the other space with a thin frame covered by using wood laths from one side.

Figure 35: Cupboard in Space GF05 (author April, 2003)

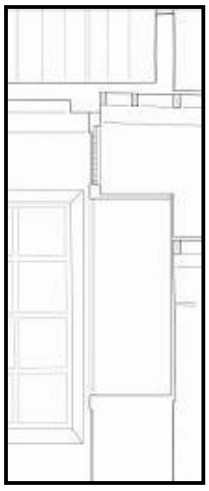


Illustration 36: Cupboard in GF05 Space

Change: The marble floor covering of the GF04 space is an alteration.
Evidence: Use of different covering material from the other spaces. In addition marble pieces have been processed with modern techniques.

Change: The top windows between GF02 and GF03 spaces have been altered.
Evidence: The top windows have been closed from the GF03 space.

Figure 36: Top Windows between Space GF02 and GF03 (author April, 2003)

Change: The mosaic tile floor covering of the GF02 space is an alteration.
Evidence: This kind of floor covering materials started to be used with French Mandate period.

Figure 37: Mosaic Tile Floor Covering of Space GF02 (author April, 2003)

Change: The two windows of the space GF01 have been altered.
Evidence: Use of fine cut stone pieces on inner side of the surfaces and brick depressed arches at the top are the indicators of alteration. Furthermore, the flat arches of the outer surface and the dimensions of the openings are peculiar.

Figure 38: The Windows of Space GF01 (author April, 2003)

Change: The courtyard door of the building has been altered.

Evidence: Use of profiled fine cut stone pieces around the openings and the concrete lintel at the top indicate the alteration which has been done on the door.

Figure 39: The Courtyard Door (author April, 2003)

Change: The shutters of the windows located on the first floor of north-west mass have been altered.

Evidence: The wooden laths placed under each window are the indicators of different type of shutters. Besides, the shutters of FF06 are stable at the top even if they seem like folding. There is not any hinges or traces of hinges at those parts, either.

Figure 40: The Shutters on First Floor (author April, 2003)

Figure 41: An Example for the Shutters in Early Periods (Demir 1996, 238)

Change: The mosaic tile floor covering of the circulation corridor on first floor of south-east mass is an alteration.
Evidence: This type of materials started to be used with the French Mandate Period.

Figure 42: The Mosaic Tile Floor Covering of the Circulation Corridor (author April, 2003)

Change: The holes which have been opened for the chimney on the façade of the north-west mass are the alterations.

Evidence: The inadequate details and place of the openings indicate the alteration on the surface.

Figure 43: The Openings for the Chimney on the North-west Façade (author April, 2003)

Change: The bed-light in-between the space GF06 and GF07 has been altered.

Evidence: The window has been closed with timber pieces.

Figure 44: The Bed-light between GF06 and GF07 Spaces (author April, 2003)

Change: The brick works in the stone courtyard wall are later alterations.

Evidence: The inadequate combination and technique of brick work in the stone masonry.

Figure 45: The Brick Work Completion on the Courtyard Wall (author April, 2003)

Change: The inclination of the roof has been altered at south-east mass where the neighbour building is adjacent.

Evidence: The peculiar connection of two building and the use of inadequate material in the roof structure show the alteration done in later periods.

Figure 46: The Roof Construction of South-east Mass (author April, 2003)

Change: The covering material of the roof has been altered at the south-west edge of the south-east mass.
Evidence: Use of inadequate material on the roof indicates the alteration.

Change: The inclination of the roof has been change at the north-east edge of the north-west mass.
Evidence: Use of inadequate materials and peculiar connection with the other mass indicate the alteration.

Figure 47: The Roof Construction of North-west Mass (author April, 2003)

Change: The four winged windows of the first floor are the alterations.
Evidence: The inadequate openings of the windows indicate the alteration.

Figure 48: The Four Winged Windows of First Floor (author April, 2003)

Change: The iron balustrades of the circulation corridor of south-east mass are the alterations.

Evidence: Use of different materials from the other balustrades indicates the alteration.

Figure 49: The Iron Balustrades of South-east Mass (author April, 2003)

Change: The door of the space GF01 is an alteration.

Evidence: Use of inadequate technique of fitting the door wing and the different dimensions with different form of the opening show the alteration.

Figure 50: The Door of Space GF01 (author April, 2003)

Change: The jointing on the stone surfaces are the alterations.

Evidence: There are two different types of jointing remains have been observed under the plastered surfaces of the stone walls.

Figure 51: The Remains of Jointing (author April, 2003)

3.4.1.2. ADDITIONS IN THE BUILDING

Change: The entire first floor of north-west mass is a later addition.

Evidence: Differences in details and architectural elements indicate that the floor is an addition built up in a later period. The windows which open out directly to the streets, the profiled details of the brackets, especially the stone ones which carry the projections and the remains of ornamented ceiling covers are some of the indicators of this change.

Figure 52: The Brackets of the North-west Mass (author April, 2003)

Figure 53: The Ornamented Ceiling of FF07 Space (author April, 2003)

Change: The entire first floor of south-east mass is a later addition.

Evidence: Differences in details and architectural elements indicate that the floor is an addition built up in a later period. The connections of the cupboards with walls in FF01 and FF02 spaces, the openings directly open out to the streets, the dimensions and the details of the openings on the courtyard façade, fine cut profiled stone works around the openings, the stair which goes up to this floor with different detailed steps and the peculiar step on the floor of circulation space are some of the indicators of the change.

Figure 54: The Cupboard in FF01 Space (author April, 2003)

Figure 55: The Level Difference on the First Floor of South-east Mass (author April, 2003)

Change: The north-east mass of the building is completely an addition.
Evidence: The peculiar connections of the mass with both other two either on ground floor or at the roof level, the window and closed top window openings of GF02 space which inadequately are in GF03 space at present time, different details of the architectural elements are some of the indicators of the change.

Figure 56: The Corner of North-east and South-east Masses (author April, 2003)

Figure 57: The Windows between Space GF02 and GF03 (author April, 2003)

Change: The GF08 space is an addition.

Evidence: The peculiar connections of the walls, the level difference between the GF07 which one of the door opens out, the different details of the door from the others in the building, the jerry-built partition walls which do not lead to the ceiling and the inadequate connection between the kitchen and the toilette are some of the indicators of the change.

Figure 58: The Door between GF08 and GF07 Spaces (author April, 2003)

Illustration 37: Space GF08 Located inside of the Space GF07

Change: The window in GF06 which opens out to the street is an addition.
Evidence: The details and the design of the window wing at inner side are different from the others. An opening which gives face to the street is not typical in earlier times.

Figure 59: The Window of Space GF06 on North-west Façade (author April, 2003)

Change: The windows of GF02, GF03, GF04 and GF05 spaces on north-east façade are the later additions.

Evidence: The details of the fine cut stone cases and profiled fine cut stone sills of the windows show the change on the façade. An opening which gives face to the street is not typical in earlier times.

Figure 60: The Windows at Ground Floor on North-east Façade (author April, 2003)

Change: The profiled fine cut stone block under the niche in GF04 is an addition.

Evidence: The details of the profiled fine cut stone block and its connection with the wall indicate the change at this part.

Figure 61: The Profiled Fine Cut Stone Block under the Niche in GF04 (author April, 2003)

Change: The cupboard located in the middle of the south-east façade of GF02 space is a later addition.

Evidence: The details and the arrangement of the cupboard differentiate from the others. It is also transverse to the arrangement of the inner façade which it has been located on.

Figure 62: The Cupboard in Space GF02 (author April, 2003)

Change: The windows of GF01space on north-west façade are later additions.

Evidence: The details of the fine cut stone cases and profiled fine cut stone sills of the windows show the change on the façade. An opening which gives face to the street is not typical in earlier times.

Figure 63: The Windows of GF01 Space on North-west Façade (author April, 2003)

Change: The stone staircase which goes up to the first floor of south-east mass and the wall underneath of the stair are the additions.

Evidence: The details of the profiled fine cut stone steps indicate the change. Use of re-used fine cut profiled stone blocks and the jerry-built brick and stone composite work of the wall are peculiar. In addition, this stair does not exist in the French Map prepared in 1928 which has been obtained from the municipality.

Figure 64: The Staircase in the Courtyard and the Wall under the Stair (author April, 2003)

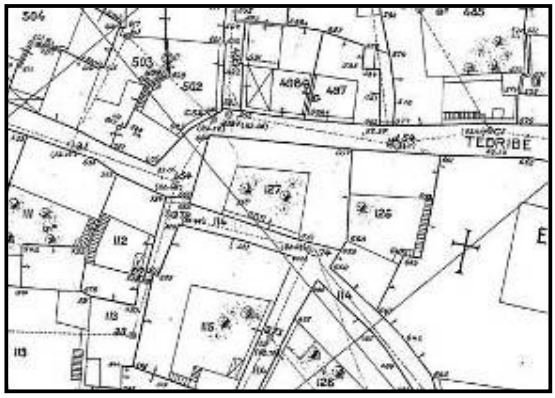


Illustration 38: The French Map Prepared in 1928 (Antakya Municipality, 2002)

Change: The windows located on the north-east façade which belong to FF02 are additions.

Evidence: The window openings have been defined with brick works in the stone masonry. The dimensions and the details of the windows are different from the others.

Figure 65: The Windows of FF02 on North-east Façade (author April, 2003)

Change: The windows located on the south-east façade which belong to FF01 are additions.

Evidence: The details of the window sills, the brick work under the windows and fine cut stone works above the windows are some of the indicators of the change.

Figure 66: The Windows of FF01 on South-east Façade (author April, 2003)

Change: The wash basin in the circulation corridor of north-west mass and the wall behind this element are later additions.

Evidence: Use of modern material with peculiar place of the basin and the jerry-built construction of the wall indicate the changes.

Figure 67: The Wash Basin in the Circulatin Coridor (author April, 2003)

Change: The timber partitions and the doors of FF05, FF04 and FF03 spaces are later additions.

Evidence: The inadequate techniques used in the construction of the frames and jerry-built fixed materials indicate the changes.

Figure 68: The Timber Partitions at First Floor of North-east Mass (author April, 2003)

Change: The wash basin in GF07 space is an addition.

Evidence: Use of modern material indicates the change.

Figure 69: The Wash Basin in GF07 Space (author April, 2003)

Change: The iron handrails of the stair which goes up to first floor of north-west mass is an addition.

Evidence: The details of the iron balustrade indicate the change.

Figure 70: The Iron Balustrade of the Staircase (author April, 2003)

2.4.1.3. REMOVALS/MISSING ELEMENTS IN THE BUILDING

Change: The roof tiles and the timber cover under the roof tiles have been lost particularly at the edges of the eaves.
Evidence: The length of the rafters and the inadequate details of the facial board at the edges indicate the changes.

Figure 71: The Missing Roof Tiles at the Edges of the Eaves (author April, 2003)

Change: The stone floor covering in front of the fireplace in GF07 space has been lost.
Evidence: The rest of the room is covered with cut stone floor covering.

Change: The upper parts of the courtyard wall near the courtyard door have been lost.
Evidence: The height of the rest of the wall indicates the change.

Figure 72: The Courtyard Wall of the Building (author April, 2003)

Change: A space located in the courtyard under the one flight stair has been removed.

Evidence: The clear difference of construction technique between the two parts of the wall and plastered area indicate the removal.

Figure 73: The Trace under the Staircase (author April, 2003)

Change: The ceiling cover of Space FF01 has been lost.

Evidence: The remains of the ceiling cover and the timber cornice at the top of the walls indicate the removal.

Figure 74: The Remains of the Ceiling Cover in FF01 Space (author April, 2003)

Change: The ceiling cover of Space FF02 has been lost.
Evidence: The remains of the ceiling cover and the timber cornice at the top of the walls indicate the removal.

Figure 75: The Remains of the Ceiling Cover in FF02 Space (author April, 2003)

Change: The ceiling cover of Space FF06 has been lost.
Evidence: The remains of the ceiling cover and the timber cornice at the top of the walls indicate the removal.

Figure 76: The Remains of the Ceiling Cover in FF06 Space (author April, 2003)

Change: Some of the doors of the cupboards in GF02 space have been lost.
Evidence: The hinges on the frames indicate the changes.

Figure 77: The Cupboards in Space GF02 (author April, 2003)

Change: Some of the doors of the cupboards and the door wings of “mabein” in GF01 space have been lost.
Evidence: The hinges on the frames indicate the changes.

Figure 78: The Cupboards in Space GF01 (author April, 2003)

Change: Some of the wings of the doors and the windows have been lost in some spaces.

Evidence: The openings, the traces of the hinges and in some circumstances, the remains of the elements indicate the changes.

Figure 79: The Missing Door and Window Wing at First Floor (author April, 2003)

Figure 80: The Missing Door and Window Wing at FF06 Space (author April, 2003)

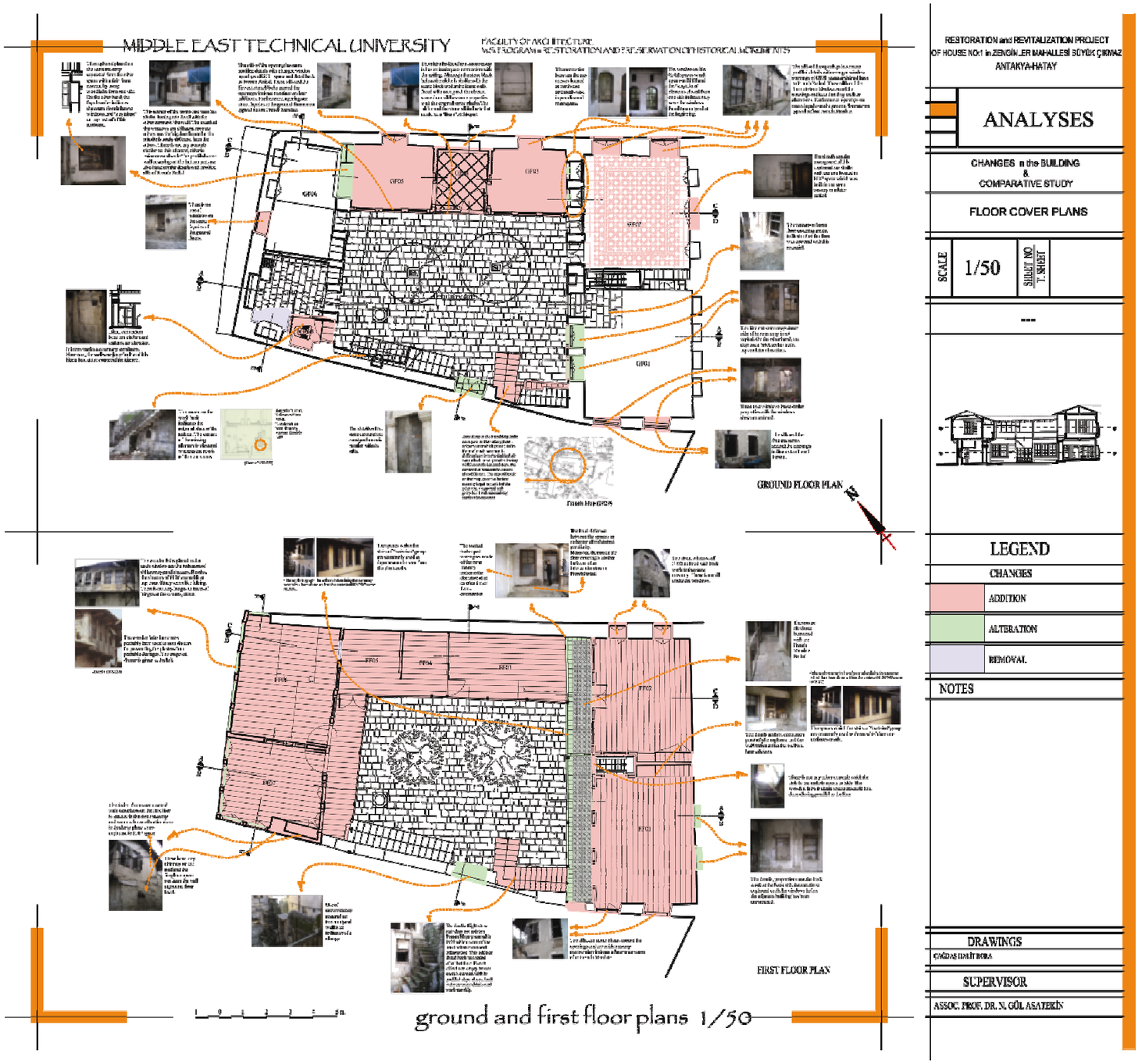


Illustration 39: Changes in the Building - Plans

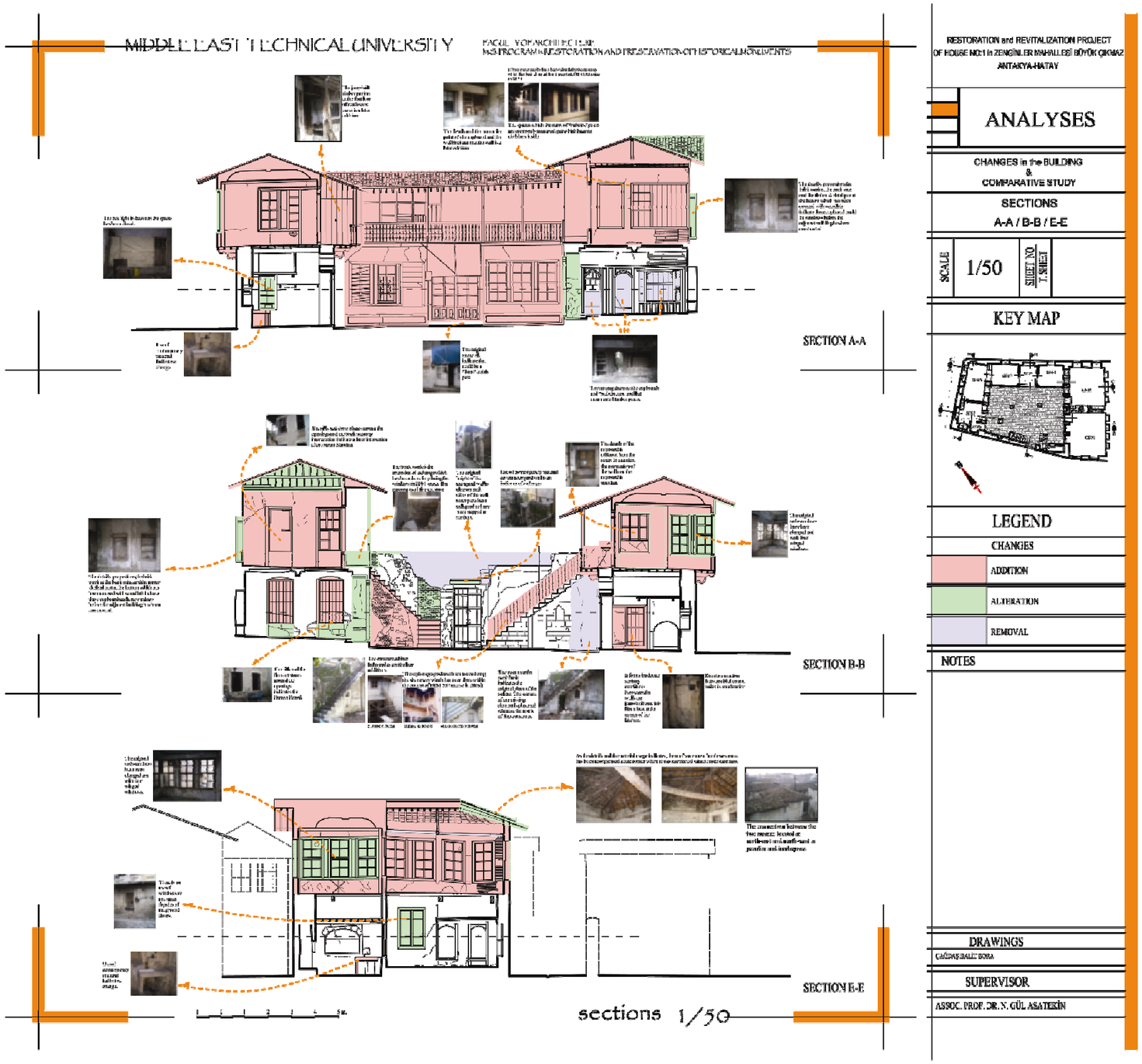


Illustration 40: Changes in the Building – Sections 1

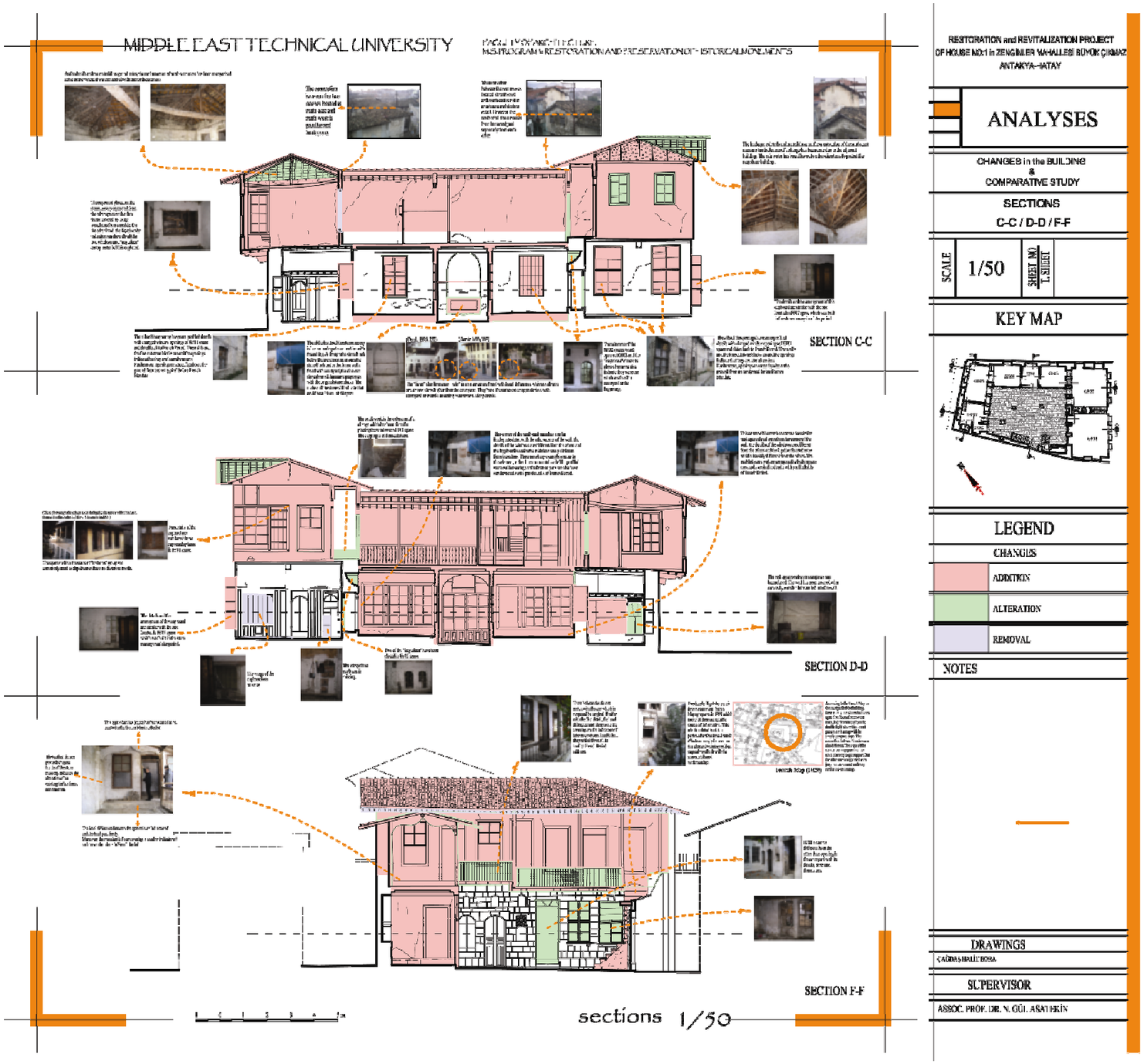


Illustration 41: Changes in the Building – Sections 2

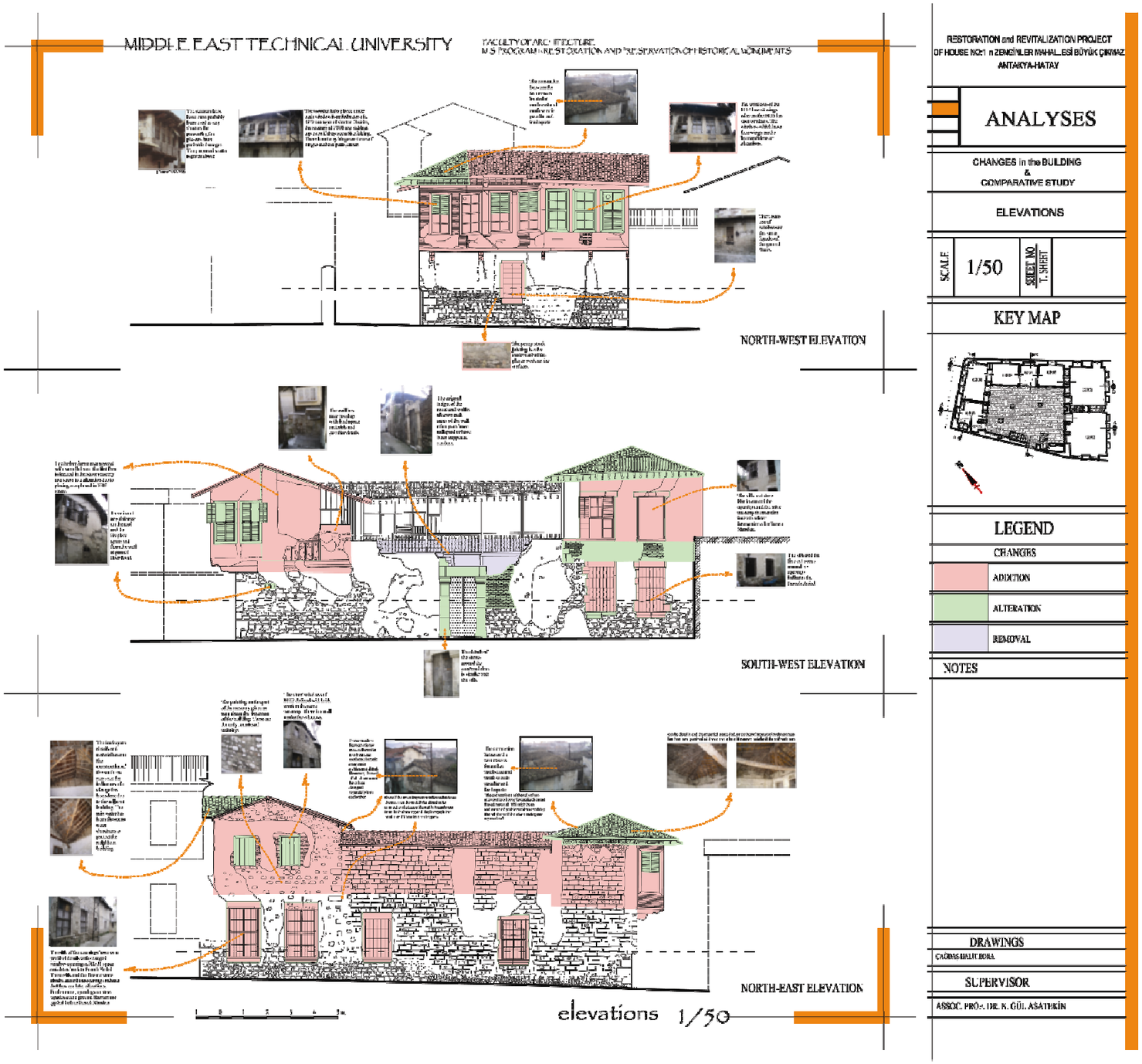


Illustration 42: Changes in the Building - Elevations

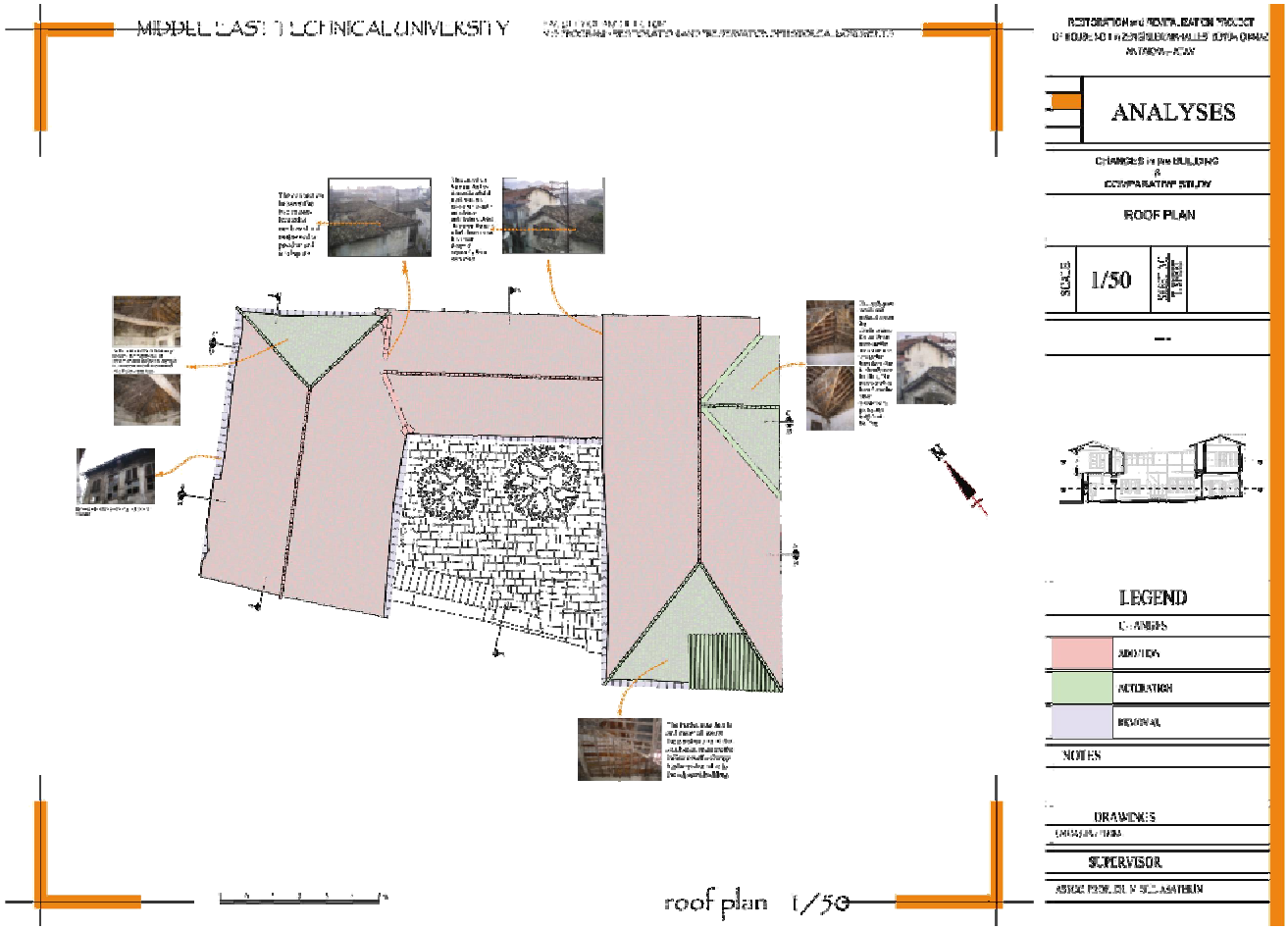


Illustration 43: Changes in the Building - Roof

2.4.1.4. EVALUATION OF THE CHANGES

Considering as an inference, the changes in the building can be summarized as changes resultant from the spatial interventions, changes as a result of structural interventions and the changes in architectural elements.

The primary changes observed as spatial interventions are mass additions, space alterations by division and the changes in the circulation layout.

The entire north-east mass of the building is an addition. Furthermore, the first floors of other two masses are additions, as well. The spaces located inside of these masses have been exposed to diverse alteration in the time.

All these spatial changes also effected to the circulation layout of the building. The new circulation corridors and a new stone staircase have been designed to reach the spaces located on the first floors. Some of the spaces which have been built by dividing bigger ones caused passing a space from another one without using any circulation space. Although the circulation layout has changed, the courtyard of the building preserved as the centre of the circulation.

The changes on the structural system are generally because of the mass additions. However, changes on the architectural elements also caused the structural intervention in the building. For instance, the brick completions around the openings are this kind of interventions. Again the depressed brick arches on the windows of GF01 space have been built as a result of changes on the architectural elements.

The changes on the architectural elements in the building seem to be done in a certain period if the details of the elements taken into consideration. The ornamented and profiled materials have been used and the building gives a richer image with these changes.

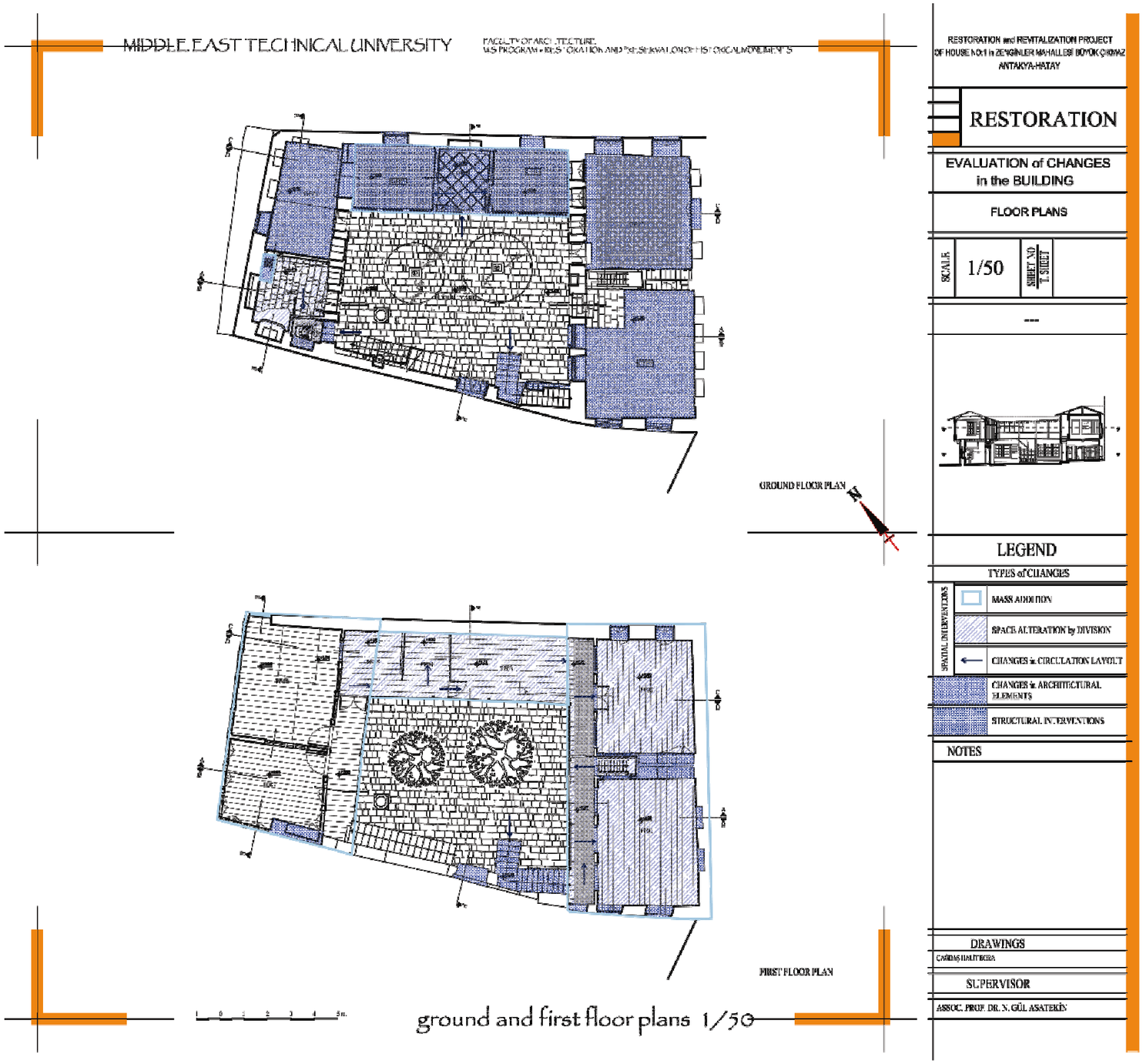


Illustration 44: Evaluation of Changes - Plans

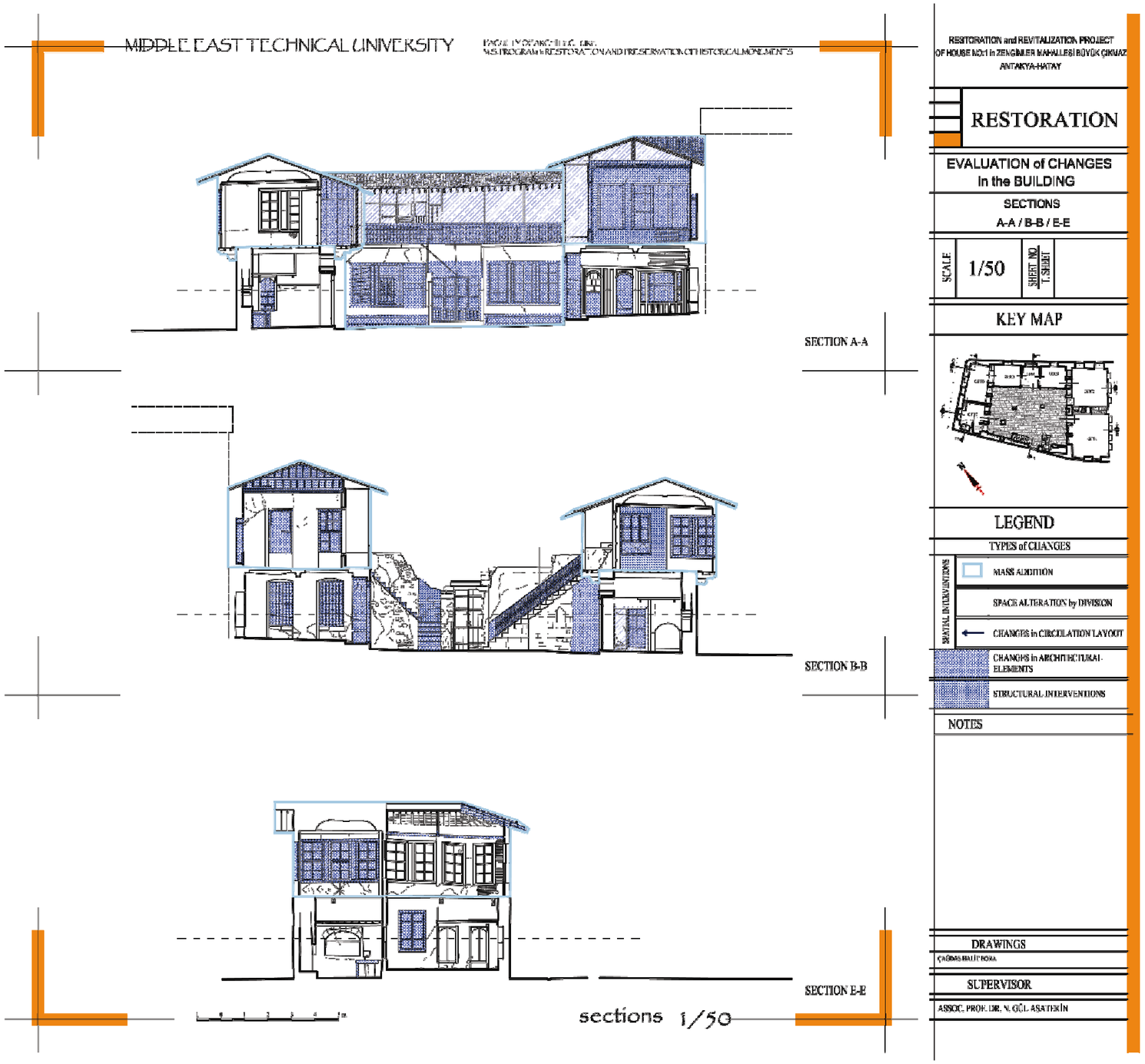


Illustration 45: Evaluation of Changes – Sections 1

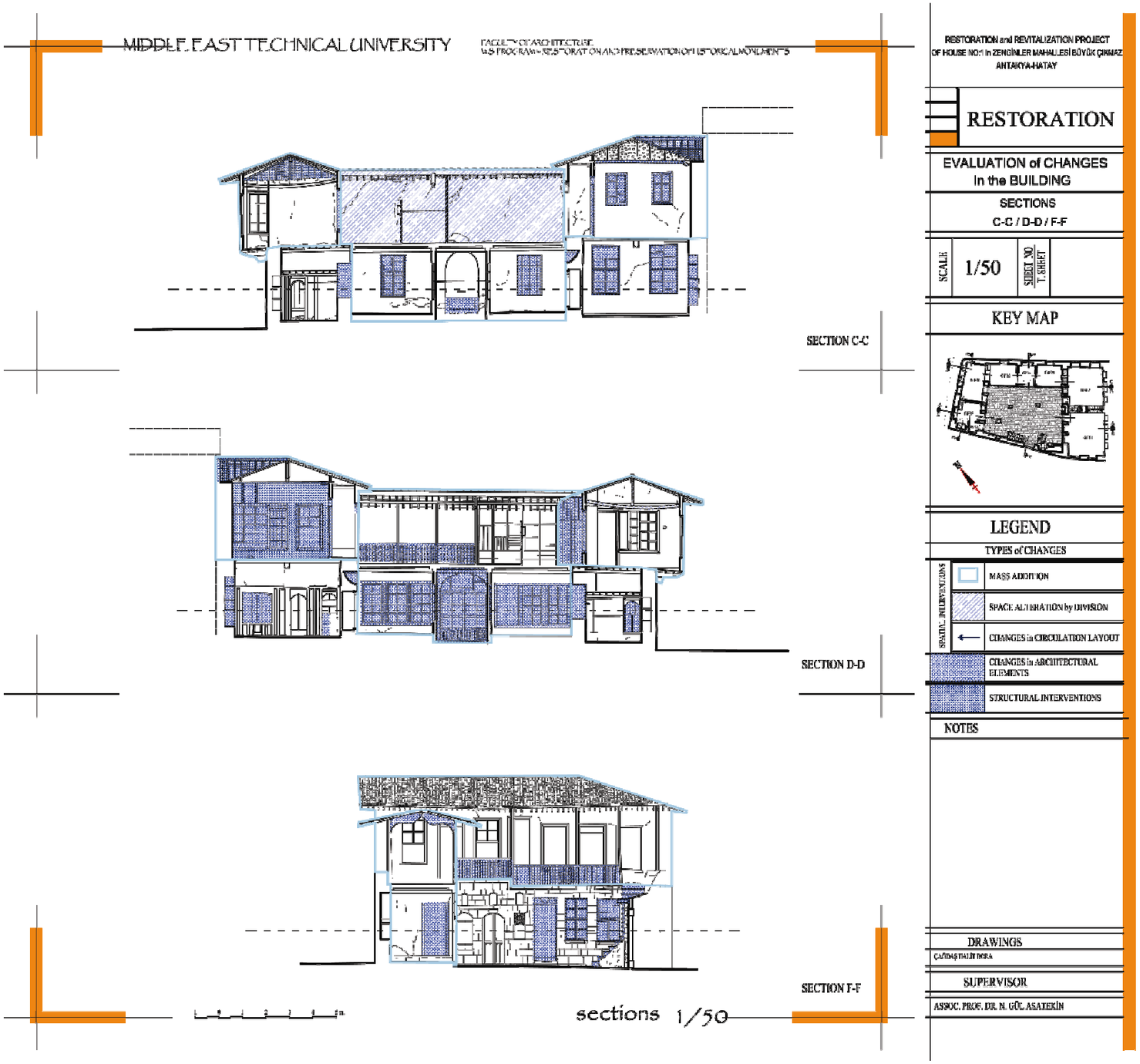


Illustration 46: Evaluation of Changes – Sections

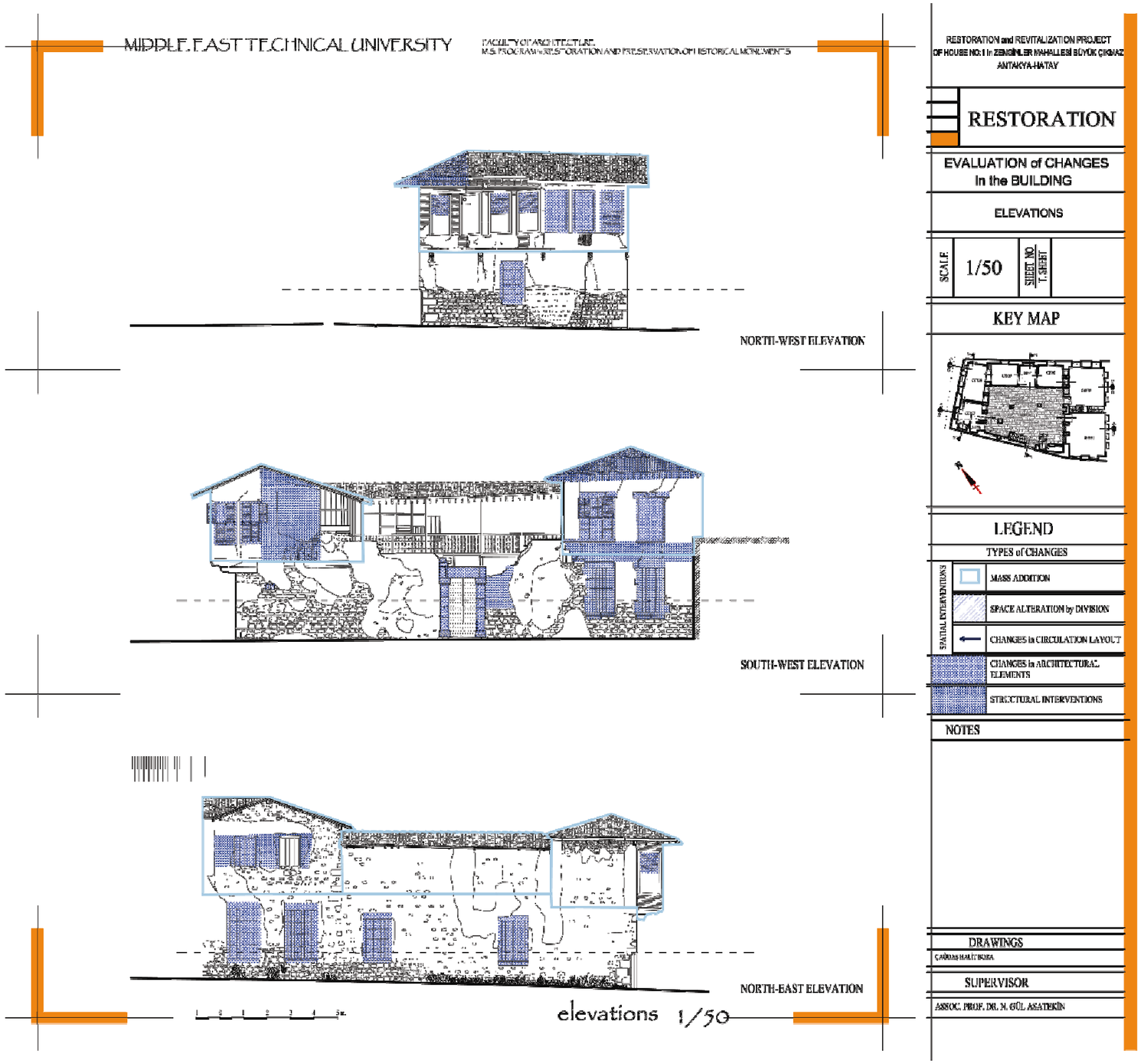


Illustration 47: Evaluation of Changes - Elevations

2.4.2. COMPARATIVE STUDY

The documents prepared during the study of Rest-507 course in 2002 Fall Semester were revised and also the additional information gathered during the site survey has been carried out in this stage.

In light of the foregoing, the typologies have been prepared so as to understand the characteristics of the traditional Antakya houses yet to define the similarities of the selected building.

Building lot locations, plan schemes, façade organizations and the architectural features of the buildings compose the criteria taken into consideration during the preparation of typologies.

The comparative study has also been used to support the evidences of the changes observed on the building. Thus, this study enabled to put the suspicions away like cases that the traces could not be interpreted whether if it is a change or not.

At this point, the changes in the building and the comparative study have been examined as an integrated study which gives the opportunity to make a brain storming about the history of the building considering the interventions have been done before the restitution phase of the thesis.

2.4.2.1. STREET - BUILDING LOT RELATIONSHIPS OF THE NEARBY ENVIRONMENT

There are five types of building lots if the relation of them with the street taken into account.

The first one coded as (P1) in the table is surrounded by the other lots at all sides and it gives a small entry to a cul-de-sac. The second coded as P2 is

surrounded by the other lots from its three sides and one side of it gives face to the street. In another example (P3), there are neighbour lots at two sides and the streets pass from other two which are parallel. The fourth (P4) one is similar with the third, but the streets are vertical to each other. The last type (P5) is surrounded by the streets from three sides and it is in neighbourhood with the other lot from its one side.

2.4.2.2. PLANIMETRIC FEATURES OF THE BUILDINGS

2.4.2.2.1. GROUND FLOOR PLANS

There are five ground floor types according to the study carried out. The classification has been done by considering the relation between the building and its lot. At this point, it is wise to emphasise that the traditional Antakya houses are organised around a courtyard which is the centre of the circulation and even the house life.

In first type (A), the building is located at one side of the lot and the entrance of the courtyard is at opposite side. The mass contains the living and the service spaces together.

The second type (B) has two sub-divisions as (B1) and (B2). Each sub-division includes the variations within itself. The one coded as (B1) has two masses on both sided which are located vertical to the street and the entrance. The (B2) type buildings also have two masses on both sides but they are parallel to the street which the entrance is on. In general, the living and service spaces are gathered in separate masses in (B) type buildings. But this is not a must. In some cases, the service spaces are located on a small part of one mass.

The third type (C) consists of three masses. The living spaces are located at the big one located on the opposite side of the street. And there are two small masses for the service spaces on both sides of the entrance of the courtyard.

The fourth (D) has two masses which combined vertically. It includes some variations according to its settlement on the lot.

At the fifth type (E), the building sits on its entire lot. As a matter of fact, this type of buildings is contemporary ones.

2.4.2.2.2. FIRST FLOOR PLANS

The classification has been done according to the stairs which go up to the first floor.

At the first type (A), the stairs are located on the courtyard. The stairs can go to either open corridors (A1) or directly to the rooms (A2).

The stairs are inside of the buildings in the second type (B). In some cases, the stairs go directly to the rooms (B1) and in the others (B2) they go to sofas and the entrances of the rooms are provided with them.

2.4.2.3. FAÇADE ORGANISATIONS

The courtyard façades of the building have been classified. The classification of the façades has been prepared according to four main criteria. They are divided into two as rich and simple by considering the architectural features that they have. Number of doors on the façade and the number of stories are the other inputs. Existence of “hazin” spaces is another criterion for the classification.[9]

The buildings coded with (A) have one door on their courtyard façades. The buildings which have two doors are coded with (B) and three doors with (C). Under these headings, the sub-classification had been done by considering the inputs above mentioned.

[9] The spaces which have been designed like half basements are called “hazin” in Traditional Antakya house.

2.4.2.4. ARCHITECTURAL ELEMENTS

2.4.2.4.1. DOORS

The doors of the buildings categorized firstly according to their styles. As is well known, there is a remarkable French affect on the traditional building stock in Antakya. This effect is very clear especially on the architectural elements such as doors and windows. So the classification has been carried out under three criteria as follows; traditional (19th Century), traditional (French Mandate) and the contemporary ones.

On the other hand, the entrances of the courtyards of the buildings are of primary importance for the buildings and they differentiate from the doors on the courtyard façades. Because of this, this differentiation states another input for the typological study of the doors of the buildings.

Finally, the materials, number of wings and the forms either of the opening or of the wings of the doors have been taken into consideration to complete the classification of the doors. According to their materials, they are divided into two as timber and metal. The doors of the buildings have one or two wings. As far as the forms of them are concerned, there are three variations as arched doors in arched openings, rectangular doors in arched openings and rectangular doors in rectangular openings.

2.4.2.4.2. WINDOWS

The same typology related with the styles of the doors applied for the windows, as well. In addition, their location is the other input for the table prepared. They have been divided into three as the windows which are located on the courtyard façades of the buildings, on both courtyard and the street façades and on street façades of the buildings.

2.4.2.4.3. CEILINGS

The ceilings have been classified as structural and non-structural according to their load carrying functions if exist. The other criterion for the classification is their forms. There are two types of ceilings in the buildings if the forms of them taken into account; the arched ceilings which are also structural elements and the flat ones which can be either structural or non-structural.

The non-structural ceilings can be without ornamentation (çıtalı tavan) or ornamented (tekne tavan) in different shapes and forms. The ornamented ceilings are with “göbek” elements in the centre in some cases and without in some others.

2.4.2.4.4. CUPBOARDS

The cupboards in the rooms of the buildings have been classified according to the architectural quality of the spaces which they belong to. So, they have been divided into three as cupboards located in the simple spaces, cupboards located in the standard spaces and cupboards placing in rich spaces. On the other hand, they have been categorised according to the entrance of the room which they belong to and the number of cupboards on the longer side of the rooms. Three are two types of cupboards by considering the entrances of the spaces; the cupboards which are placing in spaces having entrances from longer sides and the spaces having entrances from their narrow sides. The number of the cupboards on the longer sides of the rooms change from one up to five but there are some cases which the longer side of the space has no cupboard on it.

2.4.2.4.5. STAIRS

The stairs in the buildings have been classified according to their shapes. The firs one is the stairs which go down to the “hazin” spaces. They are generally

narrow and have a few numbers of steps. The second one is straight stairs and the last is “L” shaped stairs.

GROUND FLOOR PLAN TYPOLOGY

STREET - BUILDING LOT RELATION

A B1 B2 C D E

P1 P2 P3 P4 P5

First Floor Plan Typology

stair is in the courtyard

A1 entrances to the rooms are from open corridors and/or 'sofas'

A2 entrance are directly to the rooms

stair is in the building

B1 room to room entrance

B2 entrances to the rooms are from 'sofa's

2.Kilise Sok. No:1 | Nasli Cikmazi No:5 | Gazi Pasa Cad. No:45 | Nasli Cikmazi No:9 | Hiyalik sok. No:1 Kahraman sok. no:39 | Hamzaoglu cad. no:33 | Gümüs sok. no:10 Hiyalin çikmazi no:1

Gazi Pasa Cad. No:23 | Gazi Pasa Cad. No:5 | Kahraman Sok. No:5 Kahraman sok. no: 27-29

Kahraman sok. no:17 | Gazi Pasa Cad. No:25

plan typologies

RESTORATION and REVITALIZATION PROJECT OF HOUSE NO:1 in ZENGİNLER MAHALLESİ BÜYÜK ÇINMAZ ANTAKYA-HATAY

ANALYSES

COMPARATIVE STUDY

PLAN TYPOLOGIES

SCALE —

SHEET NO 1. SHEET

SITE MAP

LEGEND

MAIN SPACES
SERVICE SPACES
CIRCULATION
BUILDING LOT

NOTES

SURVEY TEAM

These classifications had been done within the context of REST 507 course in 2003 and updated in 2005.

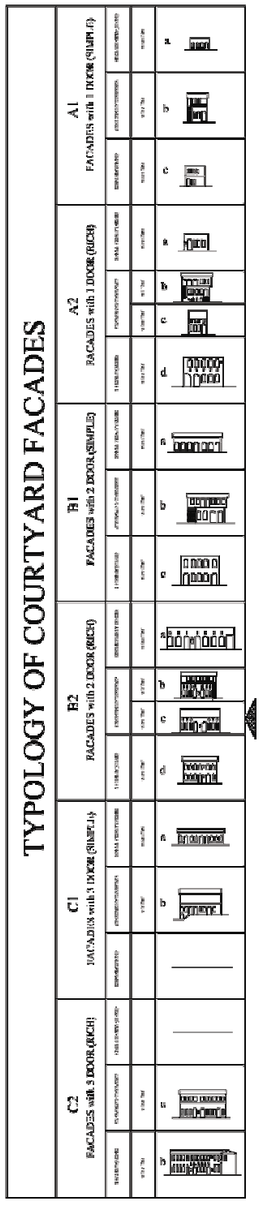
DRAWINGS

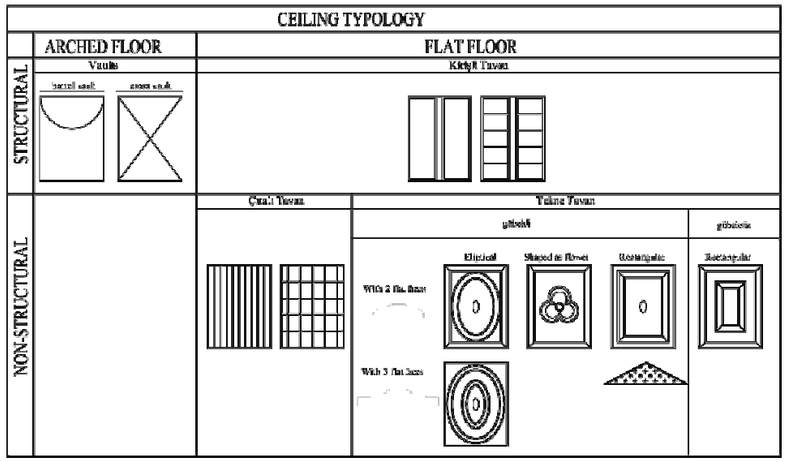
ÇAĞDAŞ İLKAL İÇ ROZA

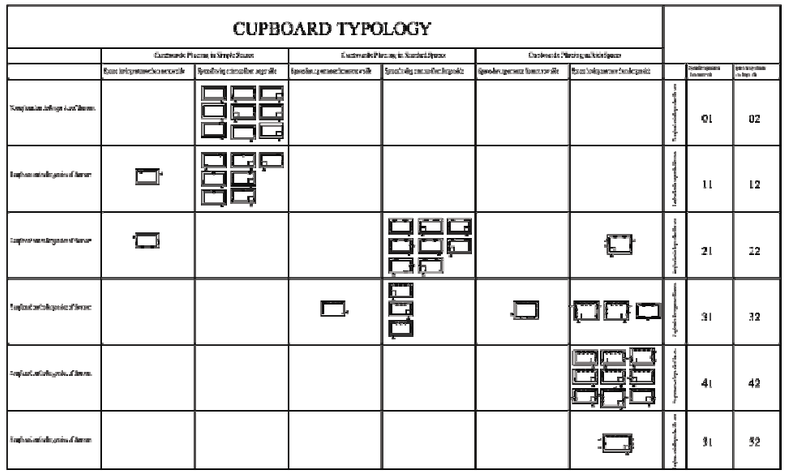
SUPERVISOR

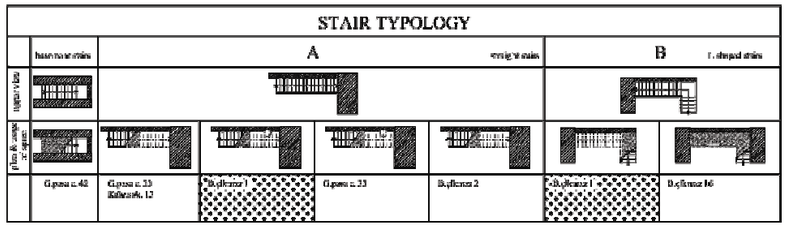
ASSOC. PROF. DR. N. GÜL ASATEKİN

Illustration 48: Comparative Study – Plan Typologies









façade, ceiling, cupboard and stair typologies

RESTORATION and REVITALIZATION PROJECT
OF HOUSE NO:* in ZENGİNLER MAHALLESİ BÜYÜK ÇIKMAZ
ANTAKYA-HATAY

ANALYSES
COMPARATIVE STUDY

* FAÇADE TYPOLOGY
* CEILING TYPOLOGY
* CUPBOARD TYPOLOGY
* STAIR TYPOLOGY

SCALE —
SHEET NO T. SHEET

SITE MAP

LEGEND

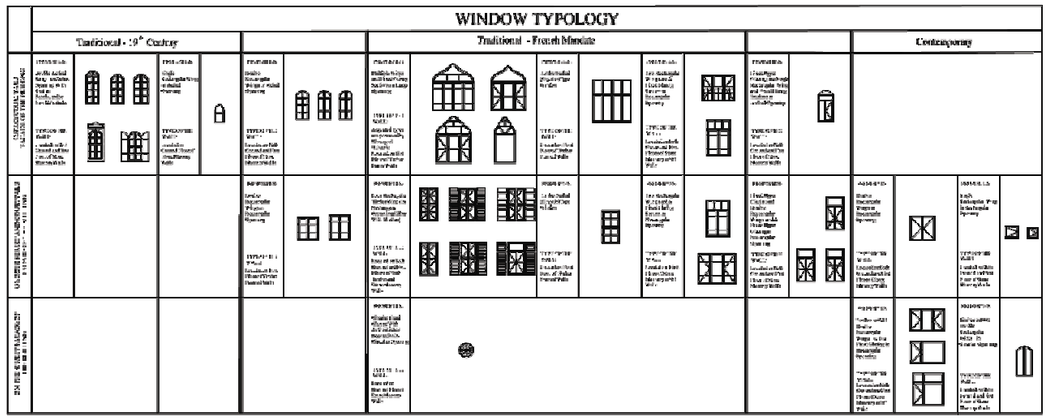
NOTES

SURVEY TEAM
These classifications had been done within the context of REST 507 course in 2002 and updated in 2005.

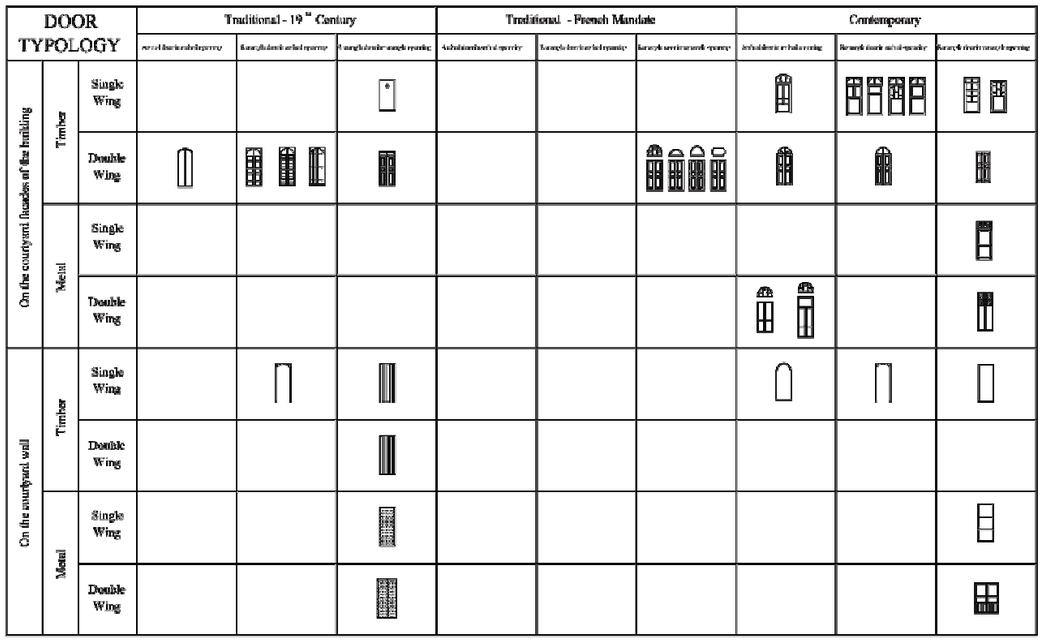
DRAWINGS
EMİNAŞ BALTA BURA

SUPERVISOR
ASSOC. PROF. DR. N. GÜL ASATEKİN

Illustration 49: Comparative Study – Façade, Ceiling, Cupboard and Stair Typologies



WINDOW TYPOLOGY



DOOR TYPOLOGY

door and window typologies

RESTORATION and REVITALIZATION PROJECT OF HOUSE NO:1 in ZENGİNLER MAHALLESİ BÜYÜK ÇINAR ANTAKYA-HATAY

ANALYSES
COMPARATIVE STUDY

* WINDOW TYPOLOGY
* DOOR TYPOLOGY

SCALE: ---
SHEET NO / T. SHEET

SITE MAP

LEGEND

NOTES

SURVEY TEAM
These classifications had been done within the context of METU 597 course in 2006 and updated in 2008.

DRAWINGS

SUPERVISOR
ASSOC. PROF. DR. N. GÜL ASATEKİN

Illustration 50: Comparative Study –Door and Window Typologies

2.4.2.5. EVALUATION OF THE COMPARATIVE STUDY

After the changes in the building and the comparative study have been revised as an integrated work, it is understood that the buildings in the selected area have similar changes in terms of plan schemes, façade organisations and the architectural element.

The interventions which have been done on the selected building also prevail on the other buildings in this area. The buildings have been transformed into two storeyed buildings. The vast majority of them have mass additions built up with timber frame on their ground floor. Some of the spaces such as “livan” have been closed. The places of the toilettes have been changed. The stairs which go up to first floors have been placed on the both courtyards and inside of the spaces. While those changes were happening, the architectural elements were in a transformation period, as well. The windows have been opened on the blind walls of the façades of ground floors. In some cases, the houses which were getting bigger had been divided afterwards via allotments.

At the beginning, the expectation was higher than the obtained information while the traces and the changes had been interpreted. Even though the study which had been done in 2002 was remarkably in high quality, the scale and the information tried to be gathered were different than it was needed in this study. Nevertheless, especially the photographs taken at those days were of help to read the traces and analyse the changes.

Consequently, the comparative study shows that the selected building is not even a unique one among the others; it is one of the richest with its design, architectural elements and the changes which have been done on it in its history.

CHAPTER 3

HISTORICAL BACKGROUND

3.1. HISTORY OF ANTAKYA

Antakya was founded with the name “Antioch” for the first time by the Seleucos in the fourth century BC.

The city was settled on the terrain between the Silpius Mountain and the River Oronthes in the second half of the Seleucids Period. The royal family inhabited on the island which exists in the ancient maps of the city.

The first layout of the city was planned according to Hippodamus’ grid iron city planning system. It was encircled with citadels.

> “A Hellenistic foundation, Antioch – unlike some of the older Greek cities – had enjoyed all the advantage of scientific city planning…The healthfulness of the site was the prime consideration in the choice of the location of the city. Water supply, climate and drainage were carefully studied. The planning of the streets of the city reflects the effective experience of the Greeks in establishing the new cities which their commercial growth and military conquests made necessary.”
>
> (Glanville 1962, 7)

In this period, there was an agora, a number of baths, a temple in the place of today’s old shopping area, aqua-duct bringing water from Daphne and a library constructed in the same area in the second period.

Antakya became an imperial city and one of the four important metropolis cities of the Roman Empire after Romans conquered it AD 64. Each Emperor built up

an important monument throughout the city and the population reached up to 350.000 during this time.

The city was under the reign of the Roman Empire until AD 395 and there was an extensive fire in 115, a destructive earthquake occurred in 365.

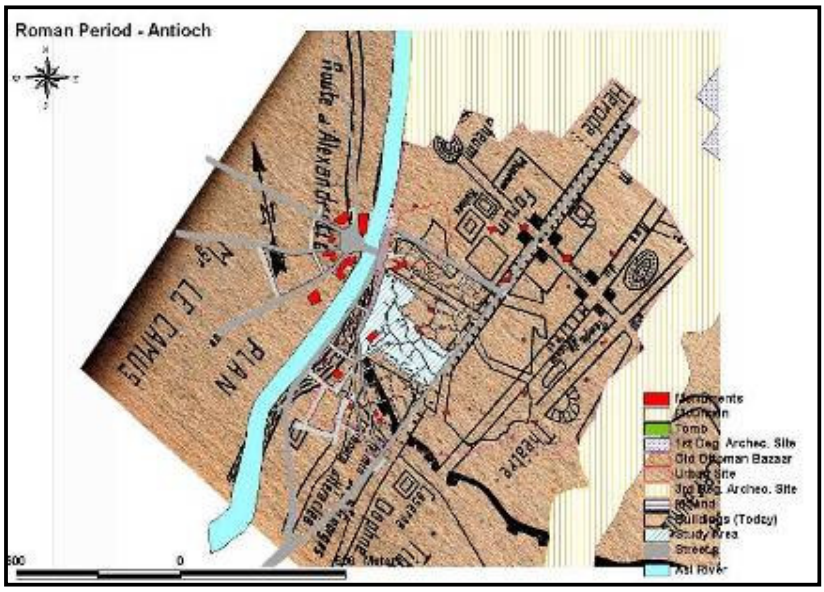


Figure 81: Roman Period Antioch (METU – Dept. of Rest., Rest 507 Course, 2002)

The physical layout of the city was enlarged towards the North-East direction and the island above mentioned was connected with a bridge. Later on, the bridge was covered. The grid pattern of the city was developed and two main perpendicular axes were constructed. One of them was Colonnaded Street corresponding today's Kurtulus Street.

The Circus, Imperial Palace on the island, the aqua-duct on the skirts of the Mountain Silpius and the Amphitheatre was the major monumental buildings constructed in this period.

Between 395 and 638, Byzantines governed the city and its importance continued during this period since now it was as a centre for Christianity.

> "Antioch has begun to decline, as a result of a terrible series of disasters in the early part of the 6th Century…"
>
> (Liebeschuetz 1972, 79)

Byzantine emperors continued to build monuments throughout the city. However, the earthquakes occurred in 526[10], 528 and 557 caused extensive destructions in the city. Especially, the one which happened in 588 destroyed all the city walls and the monuments. In 542 and 560, the city was exposed to disaster of plague epidemic.

The Byzantines preserved the physical layout of the city. They enlarged the citadel two miles in the south direction during the period of II. Theodosius.

A number of churches and baths were constructed. Some of the Roman temples were converted to churches and the other's materials were used in the construction of the city walls.

The Arabians gave a minor importance to Antakya during their reign between 638 and 968, due to the increase popularity of the other Arabian cities such as Baghdad, Harran, Basra and Chufa.

They built a castle on the Mount Silpius against the Byzantine attacks. Many people died because of the earthquake occurred in 865.

[10] "Justinian I, who renamed it Theopolis ("City of God"), restored many of its public buildings after the great earthquake of 526, whose destructive work was completed by the Persian king, Khosrau I, twelve years later. Antioch lost as many as 300.000 people.", http://en.wikipedia.org/wiki/Antioch, last accessed on: 18.06.2007

In 969[11], the city has gone under control of Byzantines and became a focal point again to revive the Empire's past glory.

Almost ten thousand people died in 1058's earthquake and St. Pierre Church which was known as the first church of Christianity was damaged as well as the other monumental buildings of the city. After this natural disaster, the city walls were reinforced. New city walls were constructed with 400 towers and St. Paulus Gate leading to Aleppo, St. George leading to Daphne. St. Simeon Gate passing Asi River was repaired.

The Seljuk became the owner of Antakya the year between 1084 and 1098. There were two important earthquakes occurred in this period. The biggest church of the city - Mar Cassinus Church – was converted to a mosque.

The Crusaders took city from Seljuk and founded the Antakya Principality and they invited Cenevitians and Venetians to improve the commercial activities again[12]. St. Pierre Church destroyed by the earthquake occurred in 1169.

Memluks, who governed Antakya from 1268 to 1516, built up several mosques and madrasas. Habib Neccar Mosque, Cindi Bath and water-mills were thought to be built in that time.

In 1516, Ottomans conquered Antakya. With the capture of Egypt, the military importance of the city has decreased. It became an accommodation point on the Hajj road to Middle East. Its population started to shrink and reach to 6000.

There was four important earthquakes and cholera spread out in 1896. Four thousand Christians left because of this epidemic disaster.

---

[11] "After Nicephorus II Phocas' conquest in 969 the Byzantines built another city, part of which was apparently on an uninhabited site. It followed the same orientation but was far smaller, though large and well built.", http://icarus.umkc.edu/sandbox/perseus/pecs/page.316.a.php, last accessed on: 24.03.007

[12] After Crusader conquered the city, from time to time, Turks surged into Antakya to get back. (Türkmen 1937, 529)

The layout of the city was diminished since so many people had left the city. The gridal pattern of the city plan turned into an organic Ottoman plan. Habib Neccar Mosque became a complex.

In the 19th century, the city was governed by the Egyptian governor Mehmed Ali Pasha. He constructed important monuments throughout the city. At that time, the districts on the opposite side of the river started to be built.

A "Kışla" (military zone) close to the South-West gate of the city and a palace close to the bank of the Asi River were constructed.

With the I. World War, French Mandate period began and western styles on architectural components became dominant more and more. Especially, Kurtulus Street on the location of the old Colonnaded Street was densely populated with these new building type examples[13]. Antakya museum, several hotels and schools were constructed in this period.

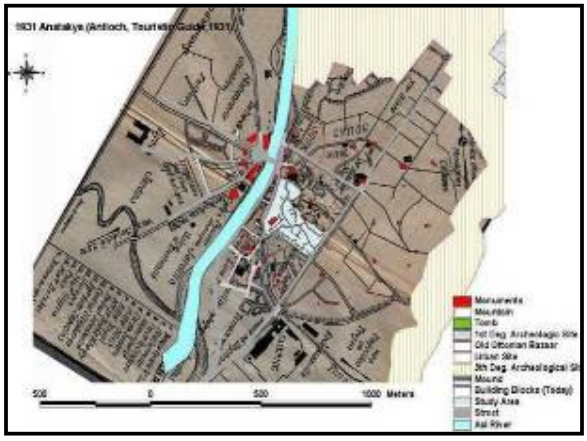


Figure 82: Antakya in 1931(METU – Dept. of Rest., Rest 507 Course, 2002)

[13] In Antakya, Roman Period street Heron which was 4 km. long was started to be re-built in 1928 with the name Rue al Jadid and was completed within nine years. (Aslanoğlu 2000, 92)

Before Antakya has become a city which belongs to Turkish Republic, it belonged to Hatay Independent Government lasted only within one year from 1938 to 1939. Since this was a political period there were no important physical events.

3.2. HISTORICAL BACKGROUND OF THE HOUSE NO: 1 IN BÜYÜK ÇIKMAZ

Today, the building is rented by a German woman who stays in a traditional house located on the neighbour street. After the negotiation done with the tenant, it is understood that the house is in the ownership of seven brothers who have enmity and their father was the first landlord of the building. In spite of the attempts to get a contact with them, unfortunately, it could not be possible. They have rented the house to the tenant with mediation of the representative of an estate agent.

As there is not any oral information about the history of the building, there is not any written document or illustration related with it. Although there is a lot of registered building in near environment, it is clear that the building has been neglected during these works. The only document related with its history is French Map drawn in 1928. Three masses of the building and one staircase on the west side can be seen on this document. Other documents have been obtained from the study done by METU - Department of Restoration and Conservation in 2002.

CHAPTER 4

RESTITUTION

4.1. PHASES OF THE BUILDING

In this chapter, the historical phases of the building have been discussed. The evaluation about these phase have been prepared according to the changes observed in the building together with the information obtained by the comparative study and the historical research. Although, there is no written document or oral information about the building itself, the historical research about the city and the documents gathered about the old part of the city shed light on the restitution.

There are three phases determined except the present state – last phase – of the building. The exact constructing date of the building is not known. But, it is supposed to be dated back to late 19th century so as the many of others.[14] The second phase of the building is dated back to early 20th century and the third phase is before 1928.

4.1.1. RESTITUTION OF I. PHASE (LATE 19TH CENTURY)

The original situation of the building has been described as plans in terms of site and floors, façades and architectural elements respectively.

[14] The city was under a serious destruction as a result of the continual wars and six big earthquakes with two fires. (Yurt Ansiklopedisi-Cilt 5 1982, 3441)
Especially the earthquake occured in 3rd April in 1872 stamped bad memory on people's mind. (İslam Ansiklopedisi 1. Cilt 1965, 231)

4.1.1.1. PLAN

At the beginning, building was consist of two masses at north-west and south-east sides of the building lot designed around a courtyard enclosed with these two and courtyard walls on the other two sides. At those days, the building in neighbourhood at the south-east side did not exist. Both two masses were one storey buildings. However, the one at the south-east had pitched roof and an attic storey which had been reached by the inner stair called “mabeyn”, whereas the other one had a flat earth covered roof connected to the courtyard with a stone stair.

There were two living spaces in the mass at the south-east side and two other at the north-west side. The kitchen was one of the spaces in this mass and the toilette was located under the stone stair defined by timber frame walls on three sides and courtyard wall from behind. The open space defined by a level difference in the courtyard called “livan” was located at the north-east side adjacent to the south-east mass.

4.1.1.2. FAÇADES

4.1.1.2.1. COURTYARD FAÇADES

The courtyard façades of both two masses were of fine cut stone. There were two doors, six windows, eight “kuş takası” and a “fanus takası” with “rozet” stone on the top of it in between the doors on the courtyard façade of south-east mass. On the other hand, there were two doors, five windows and seven “kuş takası” on the courtyard façade of north-west mass. There was a big niche spanned with and arch right in front of the “livan” on the courtyard wall at north-east. The entrance door was located on the courtyard wall at south-west edge. The staircase of the roof was also adjacent to this wall and the toilette was under this stone stair. The surfaces of the courtyard walls had jointing approximately flushed with the stone surfaces.

4.1.1.2.2. STREET FAÇADES

The all of the street façades were consist of blind walls in this phase. The entrance door of the building was located on the south-west façade and the metal door was placed into an opening defined with simple fine cut stone blocks. The courtyard walls were capped on the top and the flat roof of north-west mass ended with cut kerbstone. The surfaces had flushed jointing on all sides.

4.1.1.3. ARCHITECTURAL ELEMENTS

The vast majority of the existing architectural elements on the ground floor were in their places in this period. The well was in the courtyard and the wash basin with its niche was on the courtyard wall near the toilette. The niche on the north-east wall of the courtyard was lime plastered. The wings of the doors and the window shutters were of timber consist of two simple thin fluted rectangular wings. The arched glazed windows were at inner sides. The window openings in GF01 space were as same as the ones in GF02. There were two windows and "kuş takası" on the north-east edge of the north-west mass which today used as a cupboard. There was not any balustrade on the stone stair. There were two chimneys on the flat roof of the kitchen; on for the fireplace and the other one for ventilation. All the floor coverings of the spaces were of stone. The courtyard and the "livan" had been covered with stone covering, as well. All of the cupboards inside of the rooms had door consist of two wings. There was a simple timber door on the floor of the attic storey which had been opened out to "mabeyn". The roof was covered with traditional roof tiles and there were facial boards on the edges of the eaves. There were not any ceiling cover on the rooms located in the north-west mass. Other two were covered with timber boards as is today.

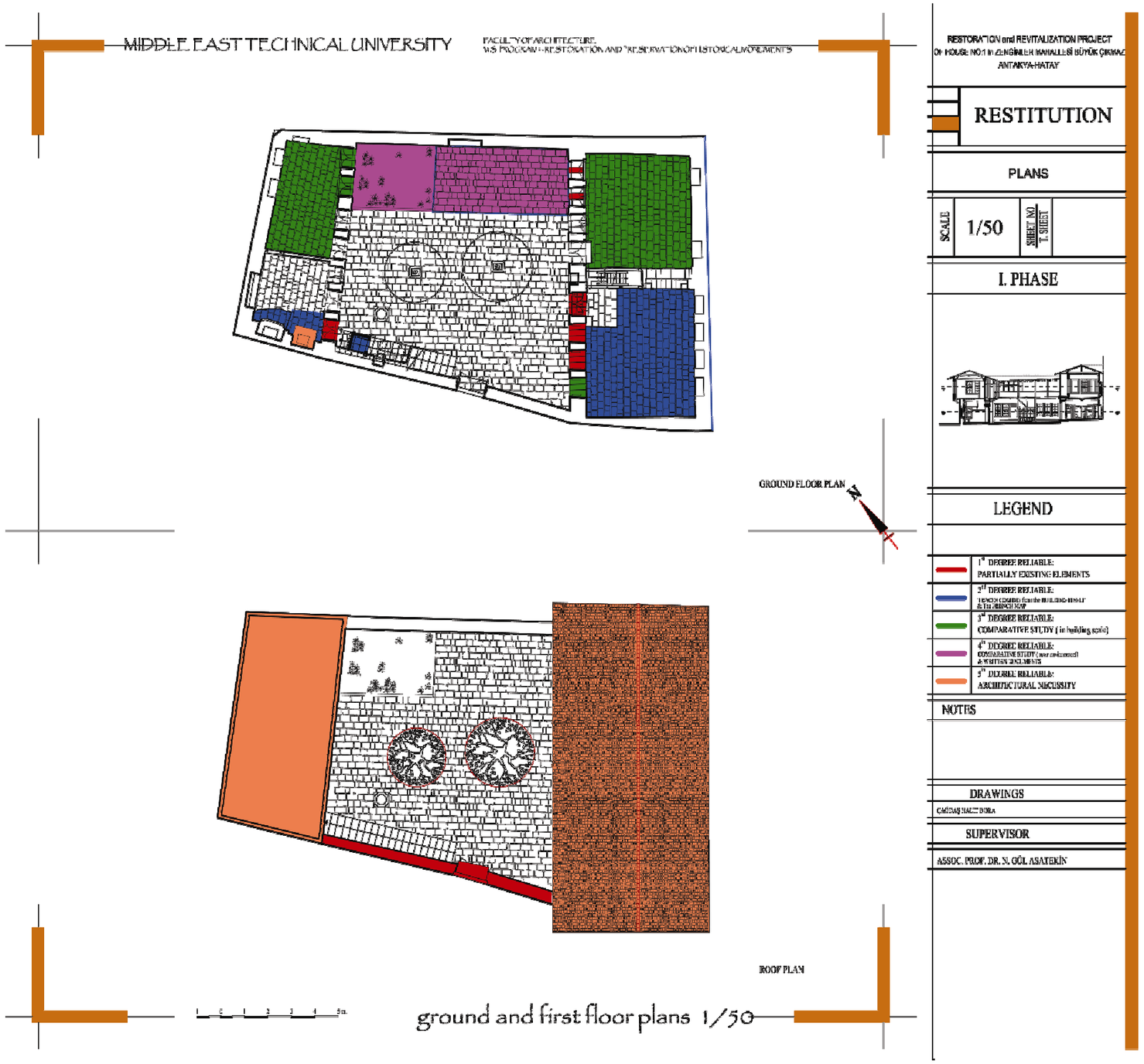


Illustration 51: Restitution of I. Phase - Plans

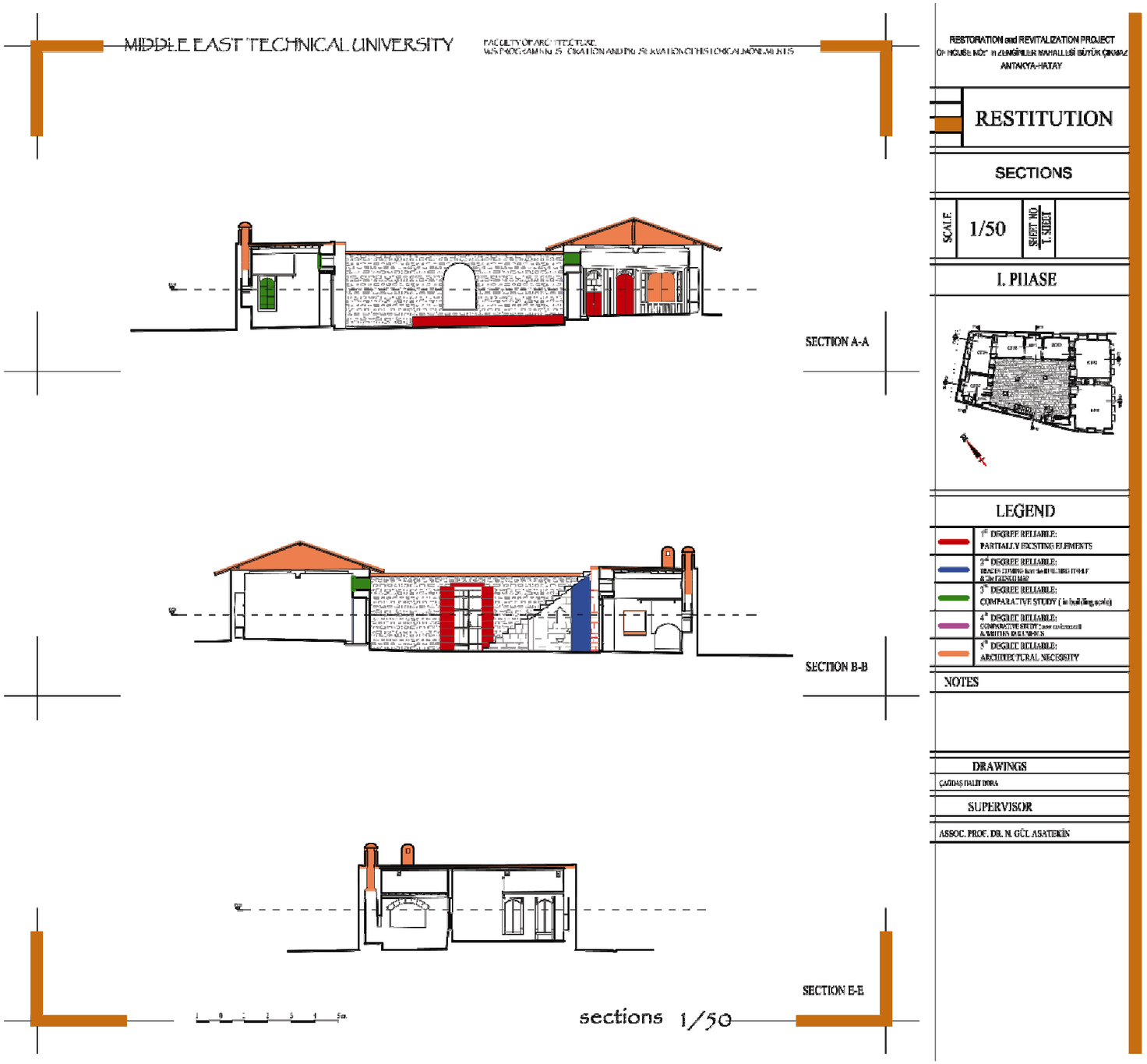


Illustration 52: Restitution of I. Phase – Sections 1

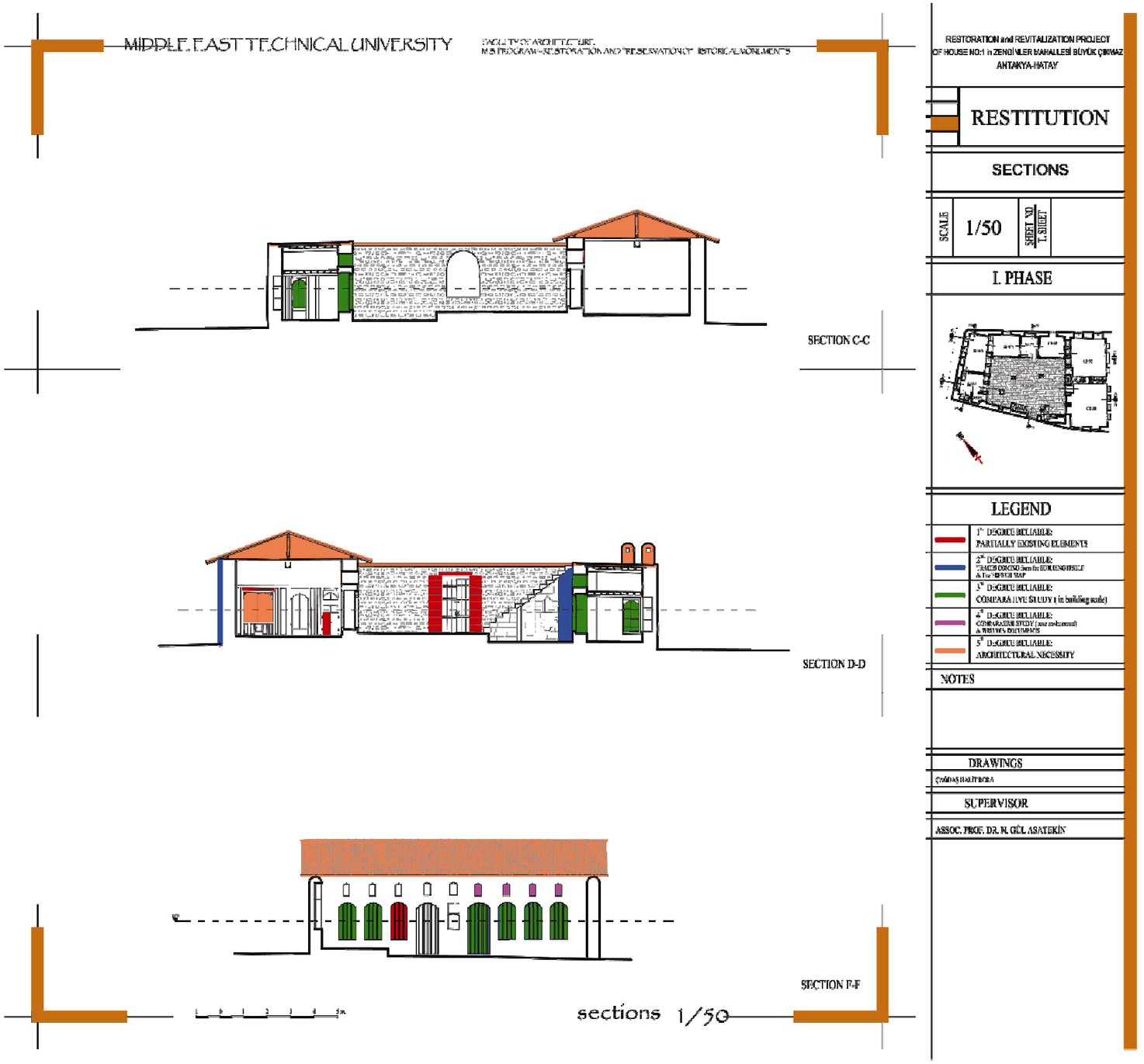


Illustration 53: Restitution of I. Phase – Sections 2

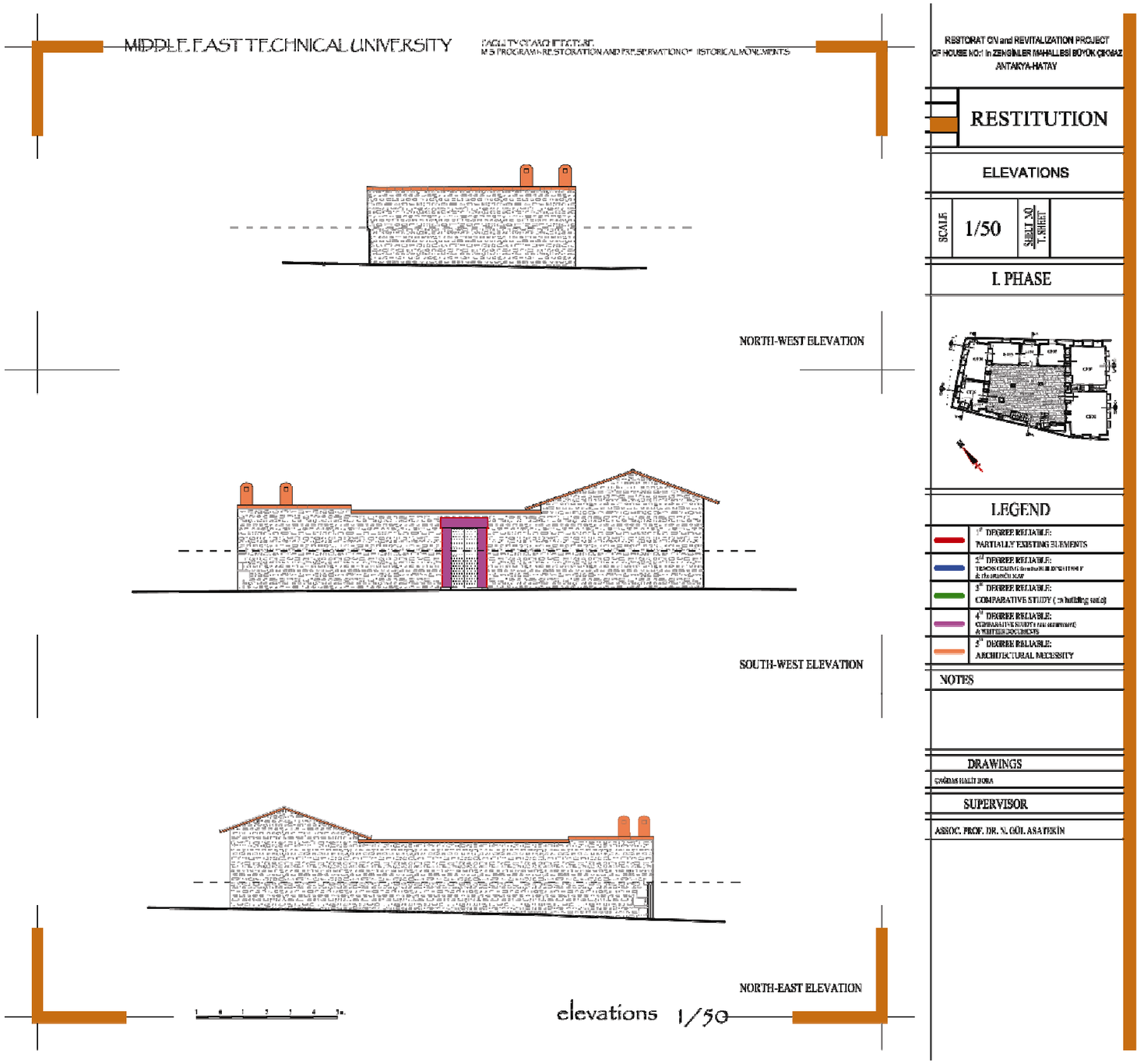


Illustration 54: Restitution of I. Phase - Elevations

4.1.2. RESTITUTION OF II. PHASE (LATE 19TH CENTURY - EARLY 20TH CENTURY)

The situation of the building in second phase has been described as plans in terms of site and floors, façades and architectural elements respectively.

4.1.2.1. PLAN

The building was consist of two masses in this phase like in the first phase but one storey masses became two storey on each side with the timber frame first floors constructions.

The first floor of the mass at south-east was totally designed as a big storage. The entrance of this space was provided via timber stair which inside of the "mabeyn". The door of this stair was on the timber floor of the space. So, the attic storey transformed into a large space. The walls of this space were constructed as an extension of stone masonry without any opening on their surfaces. On the courtyard face, it was constructed as a timber frame wall with window openings on it. Today's building in neighbourhood at the south-east side did not exist at those days.

A timber frame structure was constructed on the ground floor of north-west mass. There were two living spaces inside of this mass and the circulation was provided by a corridor planed in front of the spaces at the courtyard side. The stone stair reached to this corridor instead of flat roof of first stage. The buttresses were placed to carry this corridor. The first floor was designed with a projection on the street face and the buttresses were also placed under this projection.

Both two masses closed with timber frame pitched roofs on the top.

4.1.2.2. FAÇADES

4.1.2.2.1. COURTYARD FAÇADES

The courtyard façades of both masses were of fine cut stone at ground floors and timber frame at first floors. The ground floor façades was completely preserved with their original properties.

The façade of the south-east mass had six rectangular window openings on it. They were closed with simple rectangular two winged folding shutters. The rest of the surface was plastered.

At the other side of the courtyard, there were two doors belong to two spaces and five rectangular sash windows without shutters. The circulation corridor was bounded by ornamented timber balustrades. There were timber posts which had been placed on the buttresses to carry the roof structure. The rest of the wall of the spaces was lime plastered.

4.1.2.2.2. STREET FAÇADES

There were seven windows on the north-west façade. All of them were sash windows and the shutters were of simple timber boards. They were opening vertically and the timber laths at the bottom of each window had been placed to prevent the plastered surfaces from probable damages when the shutters were opened. There are five buttresses and each one had two components. The one on the top was of timber and the one at the bottom was made of profiled fine cut stone. However, the buttress located at the south-west corner had two timber components one of the top of the other.

There were two windows on the south-west façade which were located on the first floor of north-west mass. Like the other windows of the same mass, they were sash windows and had timber shutters. The timber buttress was extended into the stone masonry right under these windows. The stone masonry was

constructed as an extension of ground floor up to roof level near the window because of the chimney of the fire place. The other chimney had been demolished. The entrance door of the courtyard had been preserved and the rest of the façade was stone masonry without openings. The masonry had jointing flushed with the stone surfaces.

The entire north-east façade was stone masonry except the small area projected at the north-west. There was a window which had same properties with the others of the mass and the rest of the timber frame structure was lime plastered. The stone masonry had jointing between the stone pieces flushed with the stone surfaces. Fine cut profiled stone blocks had been used at the north-west corner up to the first floor level.

4.1.2.3. ARCHITECTURAL ELEMENTS

The architectural elements located on the ground floors and in the courtyard had been preserved. In addition, the doors, the windows, the buttresses and the timber balustrades located on the façades of the first floors were mentioned above.

As far as the rest is concerned, there were two windows located on the south-east wall of the south-east mass. They had two winged folding simple timber shutters on them.

There was a window on the wall between spaces located at the first floor of north-west mass. It was arranged with narrow timber niches and timber frames on the corners which got the doors inside when they were opened. There were deadlights on the top of these doors. The ceilings of these spaces were ornamented. The one at the north-east side had an ornamented timber ceiling cover with its ornamented timber cornices. The other one had a timber frame ceiling covered with wood laths and plastered called as “tekne tavan”. There was an ornamented timber element in the centre of the ceiling called “göbek”.

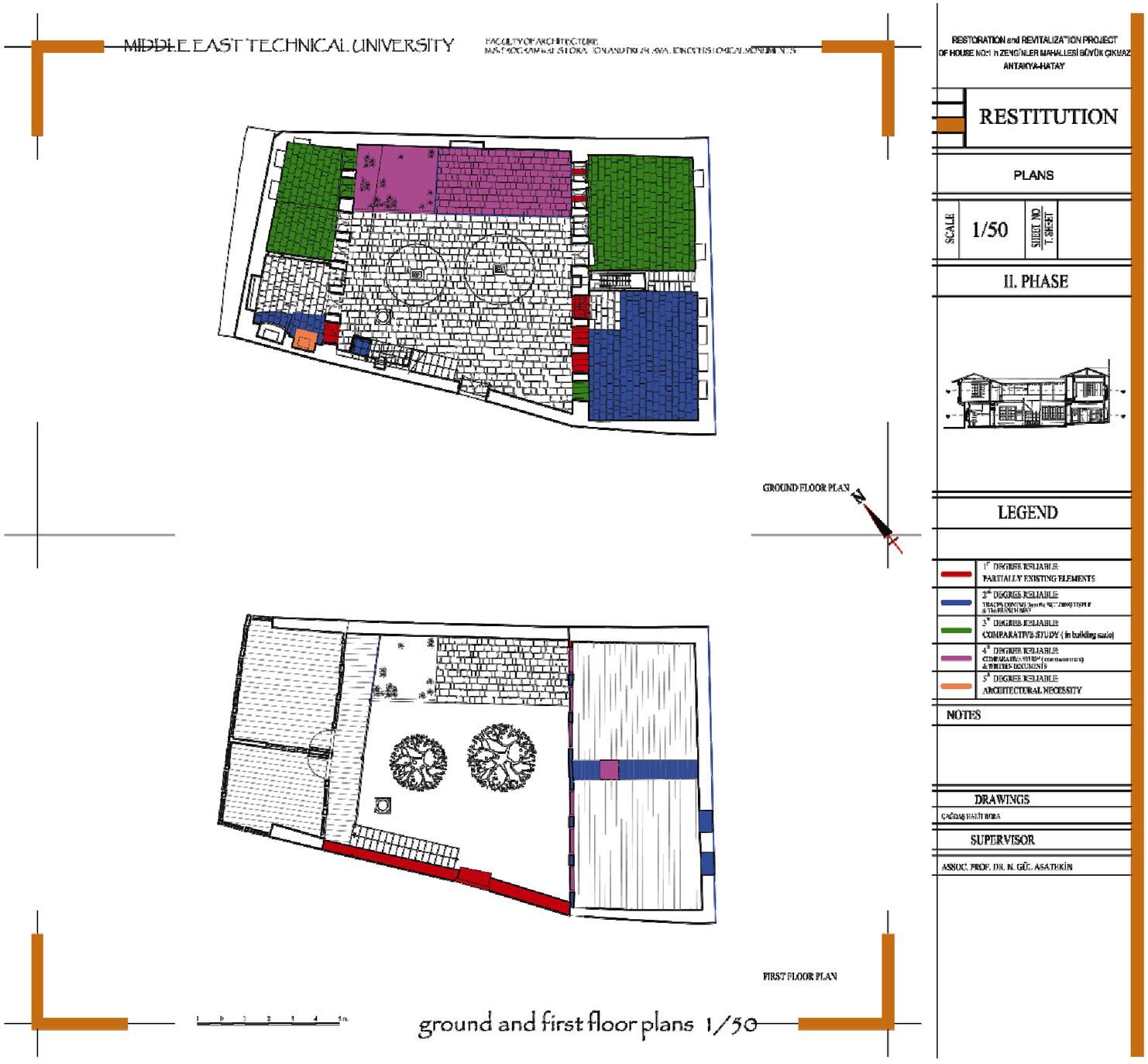


Illustration 55: Restitution of II. Phase - Plans

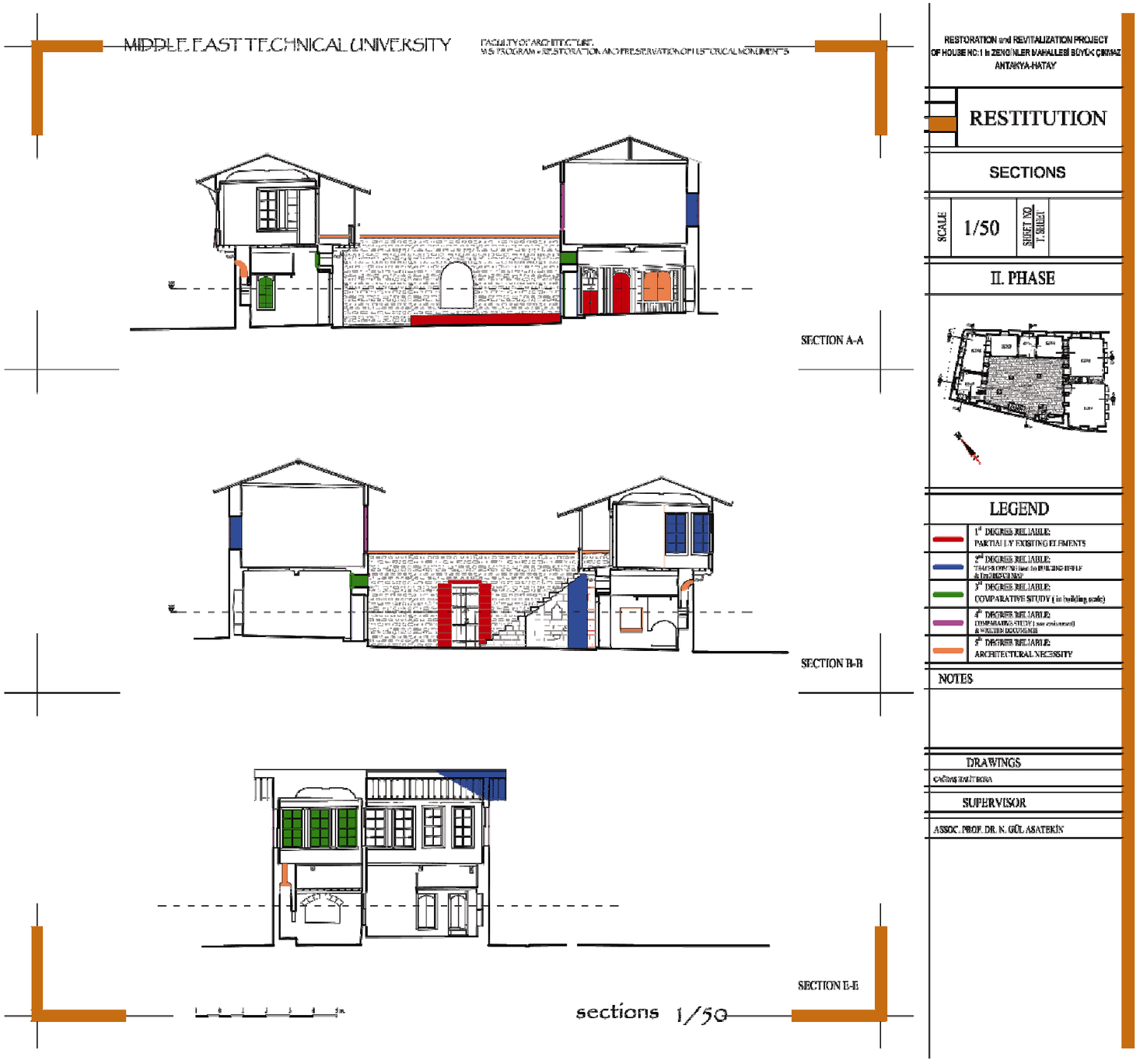


Illustration 56: Restitution of II. Phase – Sections 1

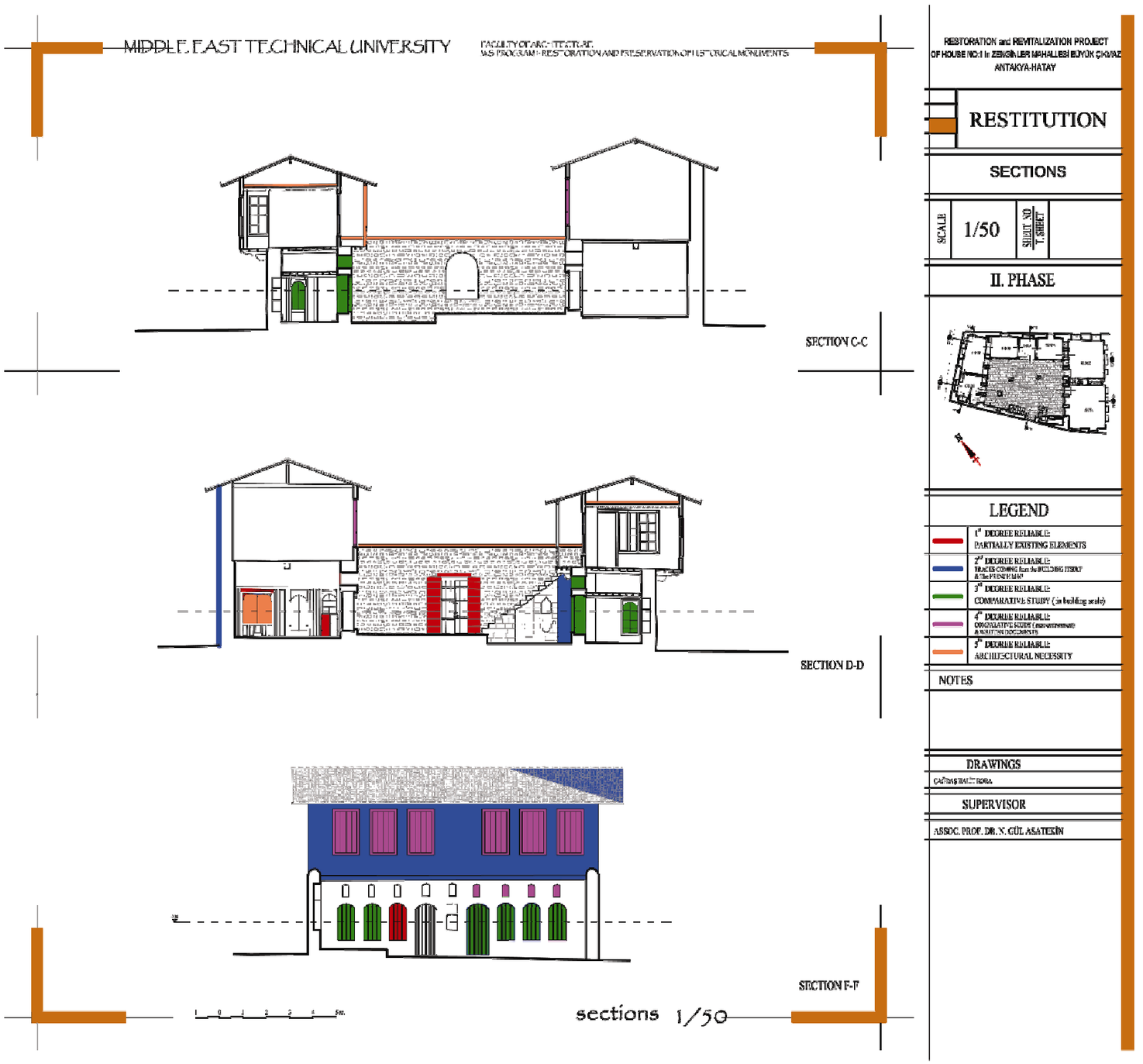


Illustration 57: Restitution of II. Phase – Sections 2

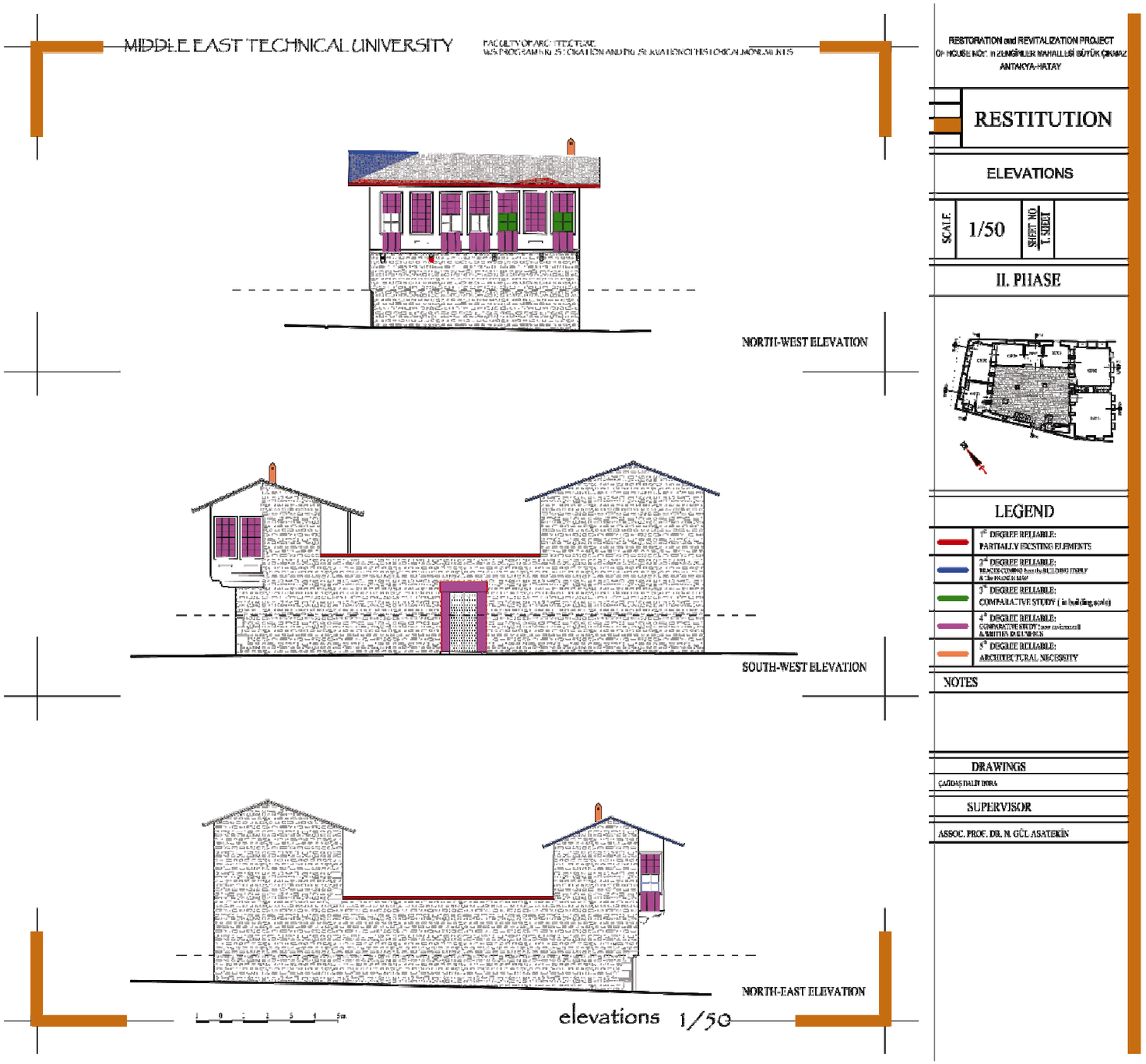


Illustration 58: Restitution of II. Phase - Elevations

4.1.3. RESTITUTION OF III. PHASE (EARLY 20TH CENTURY - BEFORE 1928)

The situation of the building in third phase has been described as plans in terms of site and floors, façades and architectural elements respectively.

4.1.3.1. PLAN

The situation of the building in second phase had been preserved in the third phase. On the other hand, a timber frame structure had been added at the north-east side of the courtyard. This mass was constructed on the “livan” and extended from the mass at the north-west to the other one at the south-east. It had three small spaces at ground floor and a big semi-open space which was connected to the circulation corridor of north-west mass. At the ground floor, the entrance of mid space was from the courtyard. The other two on both sides were entered from the one in the middle. The mass had a pitched roof on the top.

With the construction of the neighbour building, the roof structure had been changed at the adjacent part and inclinations had been given to the opposite sides to protect this new building from the rain water. The roof structure of the north-west mass was changed at the connection corner with the new mass. In addition, the two windows located on the south-east wall at first floor of south-east mass were closed with brick works and transformed into cupboards. In the same space, two new windows were opened on the north-east wall.

4.1.3.2. FAÇADES

4.1.3.2.1. COURTYARD FAÇADES

The courtyard façades of the existing masses of the previous phase had been preserved. There were six rectangular windows and a door placed into an

arched opening at ground floor. On the top, there were timber posts up to roof level and ornamented timber balustrades in-between them. The surface of the courtyard wall at south-west was re-pointed with penny-struck jointing.

4.1.3.2.2. STREET FAÇADES

The street façades of the building was preserved as they had been in the previous phase in terms of architectural elements. As it was mentioned above, two windows had been added on the first floor of south-east mass on north-east façade. In addition, the entire surfaces of the stone masonries were re-pointed with penny-struck jointing on all façades.

4.1.3.3. ARCHITECTURAL ELEMEMENTS

In this phase of the building, the architectural elements of the previous phase had also been preserved. The windows of the north-east mass were sash windows. There were not any shutters on them. There was a deadlight on the door in the middle of the ground floor and the door was two winged and glazed. The form of the door was rectangle. Two big fine cut stone covers were placed under the windows. There was another smaller one was placed under the niche in the mid space, as well. The doors of the spaces at both sides were one wing simple timber doors. They were designed with narrow niches at one side. Marble floor covering had been used on the ground of the space in the middle. Other two were covered with levelling concrete. The ceiling of them were covered with timber boards and wooden laths in-between them.

The window openings of the north-east façade had simple timber two winged folding shutters placed on the outer surface. There were not any glaze wings on them.

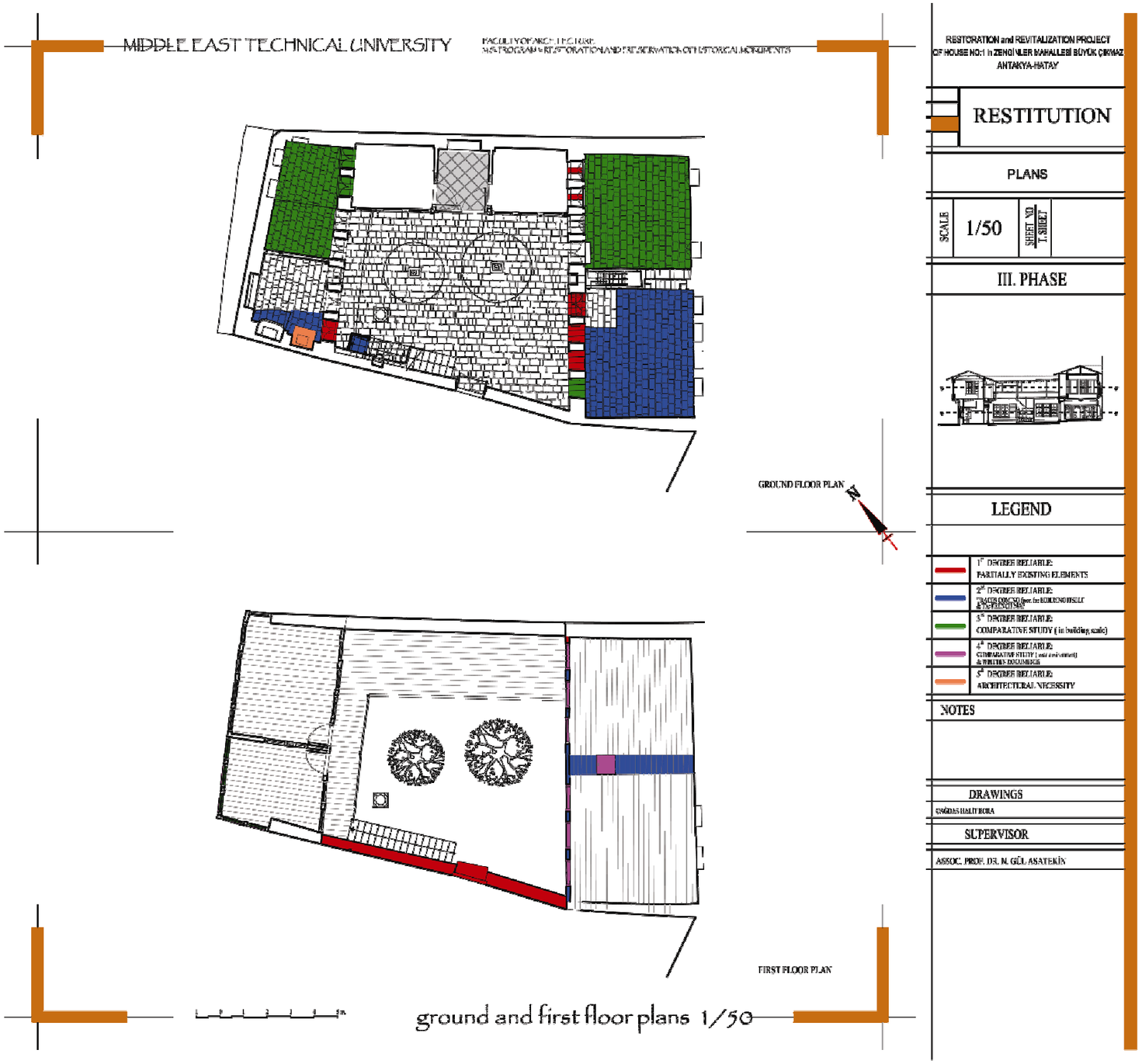


Illustration 59: Restitution of III. Phase - Plans

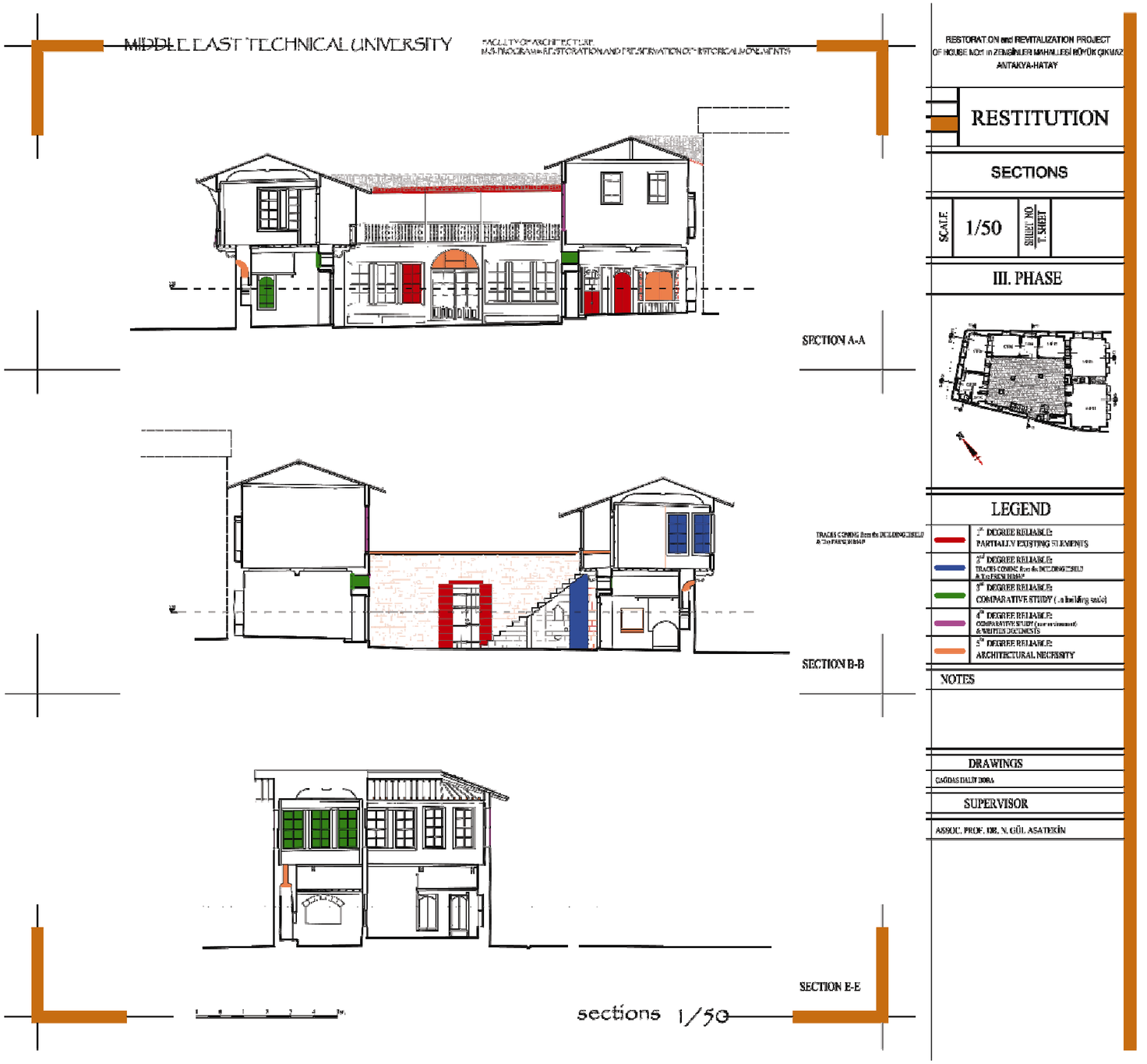


Illustration 60: Restitution of II. Phase - **Sections 1**

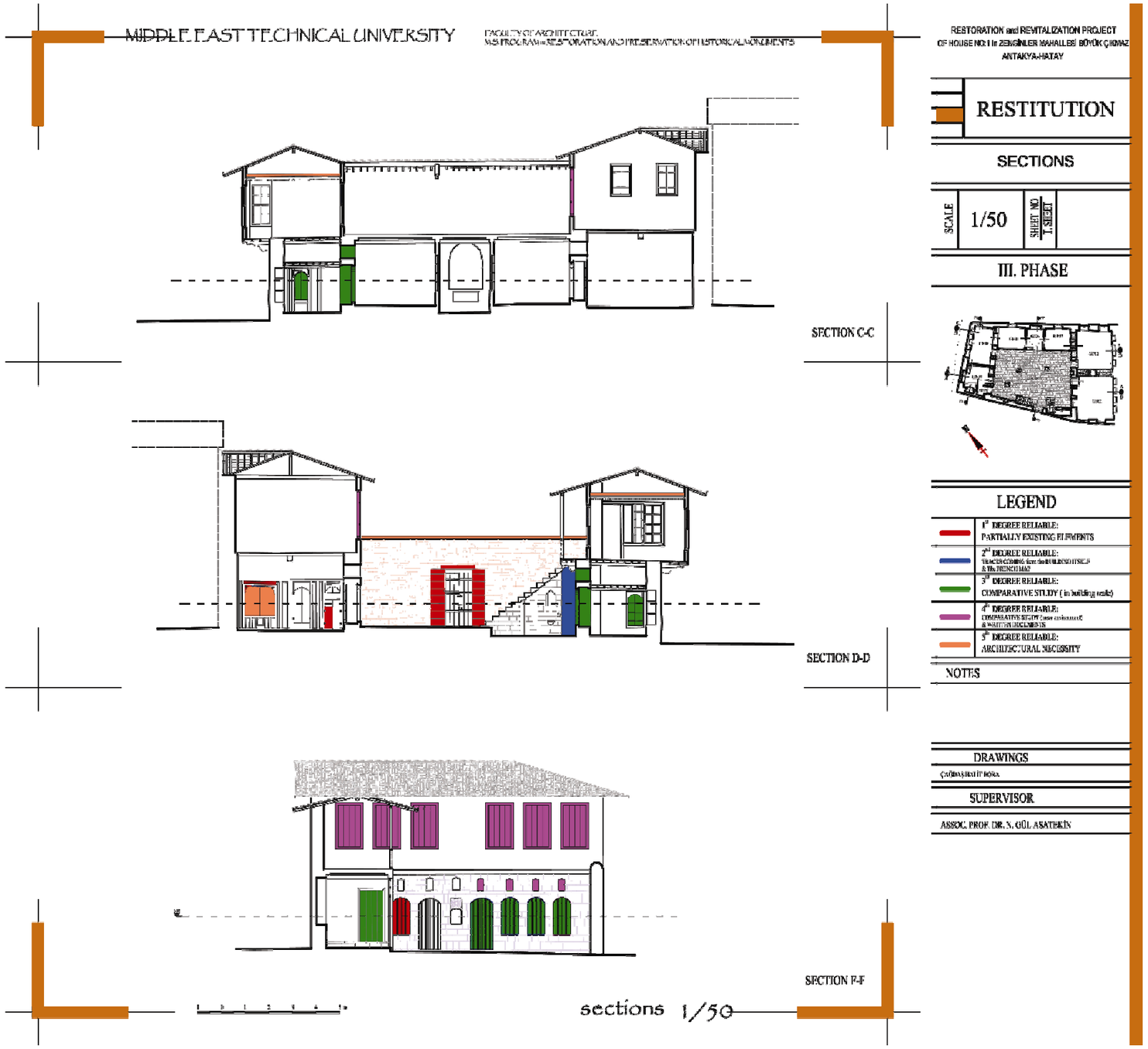


Illustration 61: Restitution of II. Phase – Sections 2

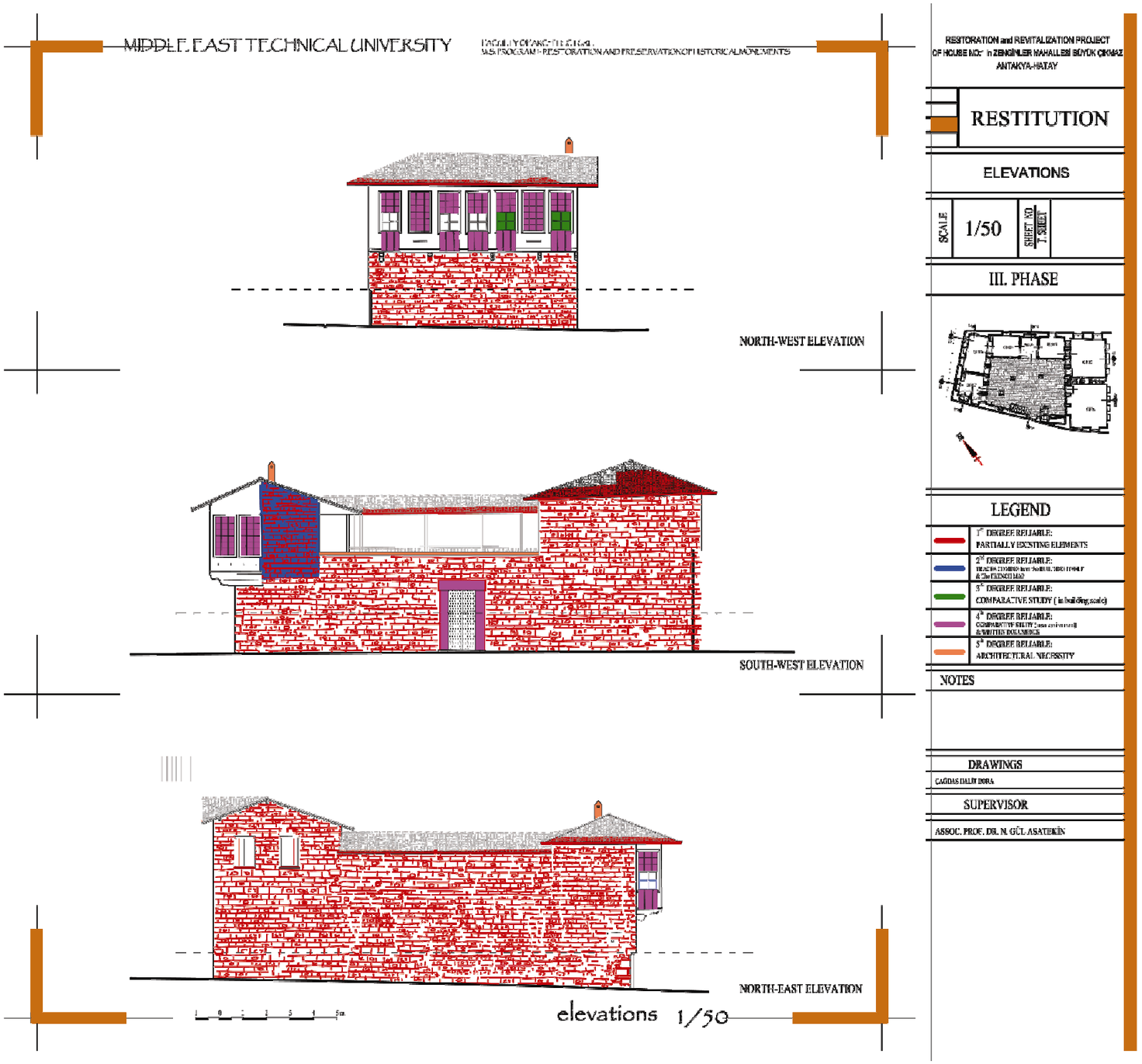


Illustration 62: Restitution of II. Phase - Elevations

4.1.4. RESTITUTION OF IV. PHASE (AFTER 1928 - PRESENT)

The present state of the building has been described with all details in the third chapter under description heading.

4.1. RELIABILITY OF RESTITUTION

The reliability degrees of the phases of restitution have been classified under five groups.

The elements which are differentiated with red colour stand for the first degree reliable. They are partially existing elements. The locations, materials, dimensions and the forms of them are known. The details of the elements are not completely known.

The second degree reliable elements are displayed with blue colour in the drawings. The traces coming from the building indicate the existence of these elements. Their locations, forms and dimensions are known whereas the materials and details are supposed. In addition, the French Map drawn in 1928 is accepted as a source which gives second degree reliability to the related element.

The third degree reliable elements are coloured with green. Their locations and forms are known because of the traces on the building whereas the materials, details and dimensions are supposed according to the comparative study which has been done in building itself.

The fourth degree reliable elements are displayed with magenta colour. Their locations are known but the other inputs are gathered from the comparative study in near environment and written sources.

The fifth degree reliable elements are shown with orange colour and they are supposed to be existent because of the architectural necessities.

CHAPTER 5

RESTORATION

5.1. EVALUATION OF THE NEABY ENVIRONMENT

The evaluation of the nearby environment has been done in terms of problems of the site and the values possess together with the potentials.

5.1.1. PROBLEMS

The problems related with the nearby environment can be classified under three categories.

- **Problems Related with the Streets**

The narrow streets of the old city has been planned to be shadowed and breezy path for the pedestrians in this hot region at the beginning. Today, entrance of vehicles in these streets in particular the dead ends which are not appropriate for this kind of traffic is a big problem for the area. In addition, parking cars on these narrow streets constitutes another problem.

The aerial lines of electricity and communication not only cause to visual pollution but also expose danger especially in the hot temperature by bending. The places of posts of these systems are problematic for the visual concerns as well as the pedestrian movement. The electric boxes have been fixed by haphazard. Another drawback, the streets are lack of lighting fixtures.

Replacement of original stone pavement with asphalt and concrete and the small channels called “arık” in the middle of the streets cause flood in rainy weathers. This intervention also damages on the building façades and stone masonries. It affects all authenticity of the streets, as well.

- **Problems Related with the Traditional Buildings**

The interventions done especially with cement based materials cause damages on the traditional buildings in terms of both structural and in material scale. The altered concrete slabs which are supported by iron I-beams, cement plasters, screed floor covers and cement based jointing are some of these interventions. The additional service spaces also blemish the perception of the courtyards and break the relationship of it with masses. Painted fine cut stone surfaces of the courtyard façades have been visually polluted.

- **Problems Related with the New Buildings**

The new buildings can be accepted another problematic issue for the site. The vast majority of the buildings' heights are inharmonious with the traditional fabric. They damage the silhouette of the historical urban site. However, their façade organisations are inharmonious with the rest to a large extent. Built B up/open area relationships of the new buildings are remarkably dense in comparison to the traditional ones. They almost sit on their lots by covering whole area.

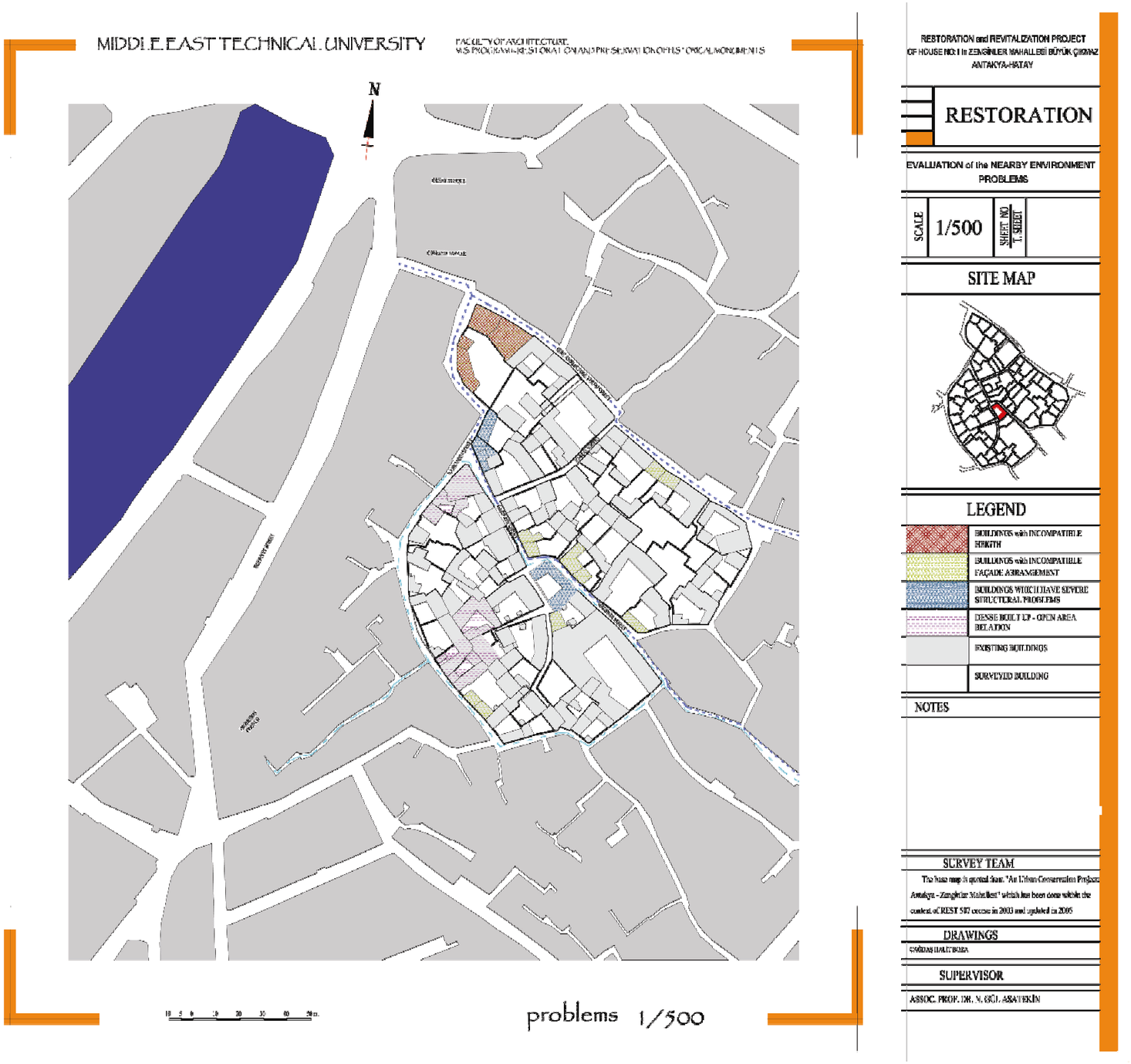


Illustration 63: Evaluation of the Nearby Environment - Problems

5.1.2. VALUES AND POTENTIALS

Zenginler District is one of the important parts of Antakya with its central location and it constitutes a fraction of the historical city. The district was bounded by Kurtuluş Street which is known as colonnaded street of Roman Period and Hurriyet Street which is an important commercial centre. Ulu Cami - the well known land mark of the city – is also located in this district. Ortodox Church, Nacip Mosque, Sarimiye Mosque, Fevzi Çakmak Primary School also known as Nun's School of French Mandate, Governmental Palace, Ata College and Antik Hotel are some of the monuments of the district. The Catholic Church and the Protestant Church are other religious centres located in the same area.

One natural site, one first degree archaeological site, one third degree archaeological site and one historical urban site have been designated with the determination of The Committee of Monuments and Museums in 12 July 1975 (Yurt Ansiklopedisi Cilt 5 1982, 3450). Zenginler District is within the borders of Historical Urban Site. There are several number of registered building is located in the district, as well. Although, the vast majority of the traditional buildings are in bad conditions or ruined the historical urban fabric has been remarkably preserved.

All these properties of the site together with its roles as a centre of religious, social, commercial and touristic activities give prime importance in the history of the city as well as the daily life.

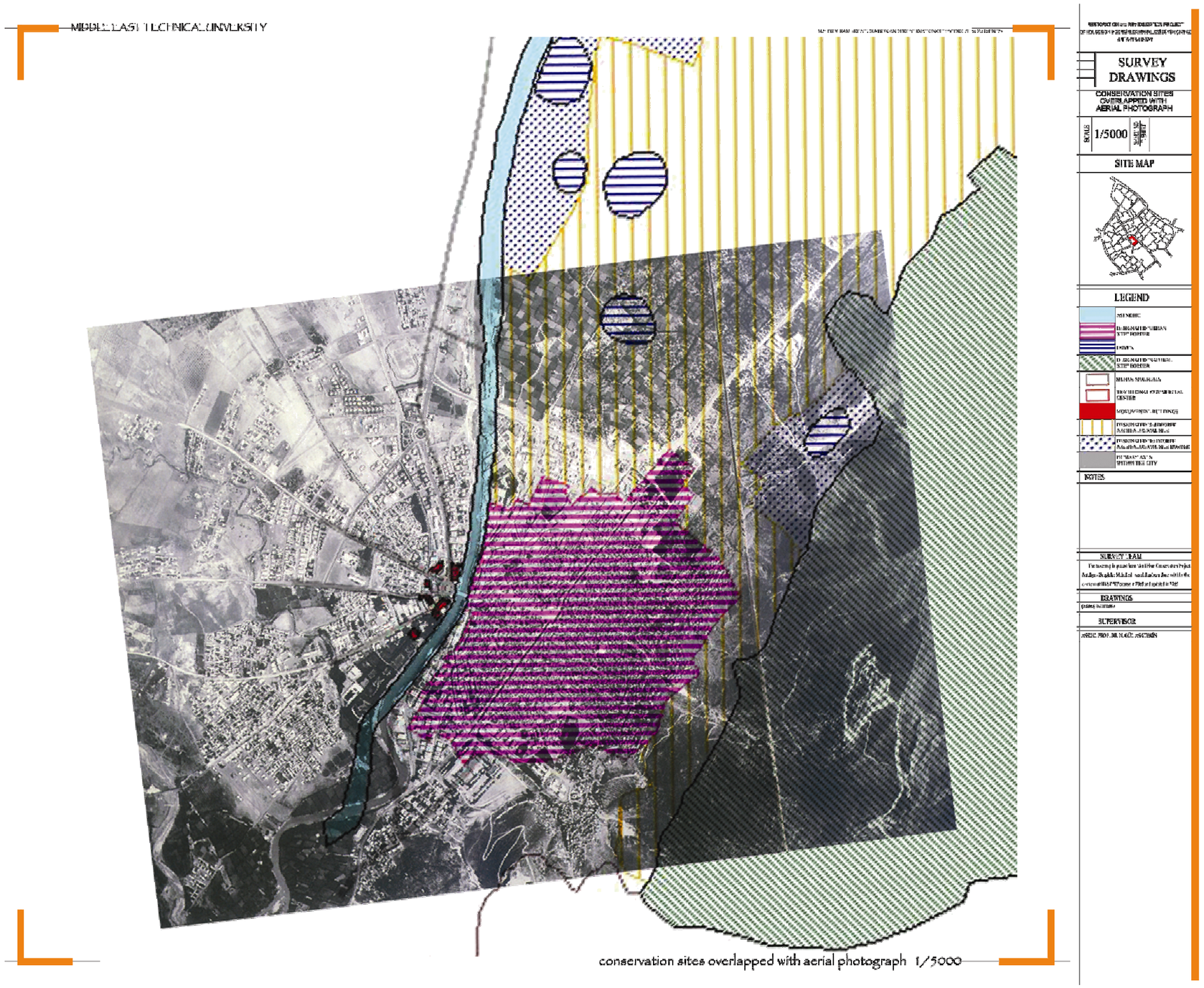


Illustration 64: Conservation Sites Overlapped with Aerial Photograph

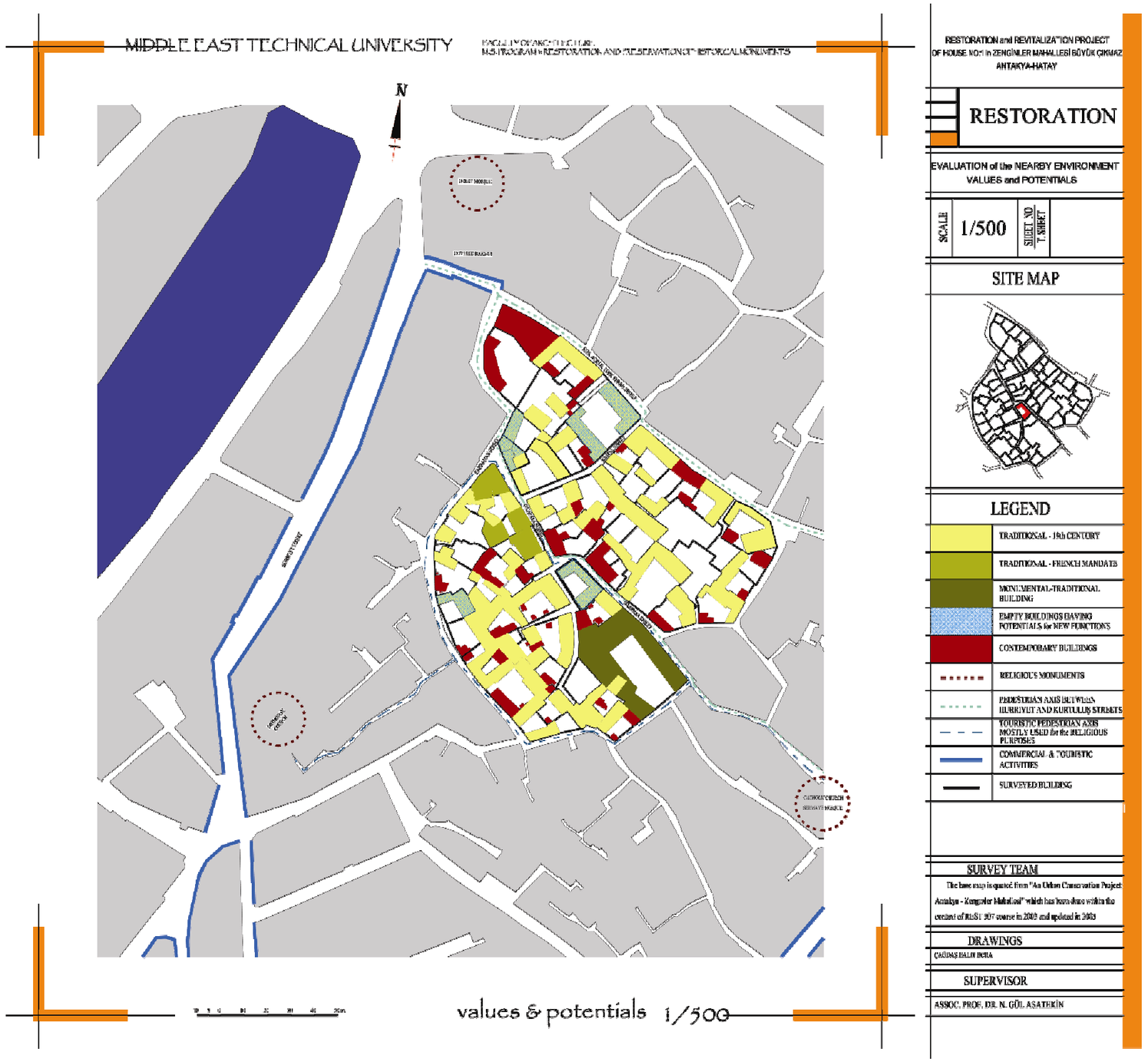


Illustration 65: Evaluation of the Nearby Environment – Values and Potentials

5.2. EVALUATION OF THE BUILDING

The previous stages of this study present that the building which has been subjected to the thesis is one of the valuable model of traditional Antakya houses with its authenticity and the changes together with its deteriorations and deformations seem to be typical for this historical urban fabric. Besides, it is in prime importance in comparison to the others with its location, as a centre of gravity of a triangle drawn by three religious landmarks on three corners. Moreover, it is not only right in the centre of the religious axes but also in the centre of touristic axes.

All these values of the building together with the environmental values of it necessitate preparing a restoration project to survive this value as a cultural heritage.

5.3. GENERAL RESTORATION APPROACH

It is aimed to preserve the building which is an important architectural heritage for the city and to perpetuate its historic and cultural significance by preparing the restoration project in order to be a model for conservation and revitalization of similar examples.

Within this context, the general principles have been formed to sound a basis for the restoration as follows;

5.3.1. PRINCIPLES RELATED WITH INTERVENTIONS ON THE STRUCTURE AND THE MATERIALS

1. The building must be registered.

2. The distinguishing qualities of the structure and its environment, in their original and earlier states will not be destroyed (ICOMOS 2003, 3). The

qualified additions and alterations which reflect the specific features of a certain historic phase will be preserved and repaired.

3. The unqualified additions or alterations which especially create harm for either heritage values or the building will be removed. However, Imperfections and alterations, when they have become part of the history of the structure, should be maintained so far so they do not compromise the safety requirements (ICOMOS 2003, 3).

4. The removal or alteration of any historic material or distinctive architectural features will be avoided as soon as possible (ICOMOS 2003, 3).

5. Each intervention will be kept to the minimum to guarantee safety and durability with the least harm to heritage value (ICOMOS 2003, 3).

6. Each intervention will, as far as possible, respect the techniques and historical value of the original or earlier states of the structure and leaves evidence that can be recognised in the future (ICOMOS 2003, 3).

7. Any measures adopted will be “reversible” so that they can be removed and replaced with more suitable measures when new knowledge is acquired. Where they are not completely reversible, interventions will not limit further interventions (ICOMOS 2003, 3).

8. The characteristics of materials used in restoration work (in particular new materials) and their compatibility with existing materials will be fully established. This must include long-term impacts, so that undesirable side-effects are avoided (ICOMOS 2003, 3).

9. The choice between “traditional” and “innovative” techniques will be weighed up on those that are least invasive and most compatible with

heritage values, bearing in mind safety and durability requirements (ICOMOS 2003, 3).

10. Deteriorated structures whenever possible will be repaired rather than replaced (ICOMOS 2003, 3).

11. Any interventions will be controlled and monitored either during or after the execution as a yield of proposed function.

12. The excavations and investigations will be done at the certain points of the building in order to control the reliability of the proposed phases of the restitution.

13. 1st degree reliable elements which are mentions in the proposed phases of the restitution will be completed with its original material, technique, form and dimension. 2nd degree reliable elements will be completed, as well. On the other hand, the completions will be with same material and same dimension but in simple forms and techniques. 3rd, 4th and 5th degree reliable elements will not be completed or reconstructed because of their speculative evaluation. There will not be any completions unless there are partially existing materials/remains or clear traces on the building itself.

5.3.2. PRINCIPLES RELATED WITH THE NEW FUNCTION

1. The periodical maintenance for the building itself will be provided with proposed new function.

2. The new function of the building will be selected by considering not loading it above its capacity.

5.4. INTERVENTION DECISIONS

5.4.1. GENERAL INTERVENTION DECISIONS

The interventions which will be done on the building have been classified under ten headings as follows;

A. REMOVALS:

- Incompatible materials on the building will be removed.
- Poor quality additions will be removed.
- Redundant materials will be removed.
- Organic materials will be removed.

B. ROOF:

- The original structure of the roof will be preserved and strengthened.
- The original roof covering will be preserved and repaired.
- The damaged or lost roof covering will be replaced with the materials that have the same properties.
- The roof boarding will be replaced with modern material in order to provide long life durability.
- Water and heat insulation will be provided.
- Rain water disposal system will be provided.

C. MASONRY:

- The demolished parts of the masonry will be reconstructed.
- The structural cracks on the masonry will be stitched.
- The lost jointing will be re-pointed.
- The deposits on the stone surfaces will be cleaned up.
- Capping will be provided on the stone masonry courtyard walls.

D. WOODEN WORKS:

- Surfaces of the wooden works will be cleaned.
- The wooden pieces will be disinfected against the wood boring insects.
- Partial replacements of the decayed pieces will be done especially for the structural needs.
- Completely decayed pieces will be renewed.

E. RENDER WORKS:

- Cement mix plasters will be stripped.
- Existing lime and mud mix plasters will be repaired.
- Missing parts of the plasters will be patched.

F. CARVED STONE WORKS:

- Missing carved stone pieces such as sills, mouldings and frames will be completed with the same material and technique.

G. FINISHES:

- Paint stripping will be done on all of the painted surfaces and these surfaces will be re-painted with appropriate materials.

H. METAL WORKS:

- The metal pieces will be repaired and the missing parts will be completed.

I. DRAINAGE SYSTEM:

- A new plane water drainage system will be provided.

J. RESEARCHES:

- The research excavation in small scales and separate points will be done on the ground.
- Paint and plaster stripping will be done in small scales at some certain places and corners.

5.4.2. SPECIAL TECHNICAL SPECIFICATIONS

The special technical specifications should be determined after the laboratory analyses on the samples taken from the building. In this study, these analyses are supposed to be done and the special technical specifications of the interventions have been described as follows;

A. REMOVALS:

1. Any roof covering other than classical Turkish tiles will be removed.
2. Redundant metal pieces and rain water goods will be removed.
3. Redundant wooden pieces will be removed.
4. Redundant electricity cables will be removed.
5. Redundant sanitary installation pipes will be removed.
6. Organic materials such as creepers, weeds and other plant formations penetrated especially on the stone masonry and stone floor covers will be removed by using chemical agents. The other organisms such as mosses, fungi and lichens will be eliminated with biocide treatment.

B. ROOF:

1. Carpentry repairs for the roof structure will be done. Weak elements of the structure will be strengthened with the additional timbers.
2. Traditional roof tiles will be stripped washed with warm water blasting under low pressure.
3. Missing tiles will be completed with the new ones.

4. Double layer oriented strand boards (OSB 11mm.) will be used as roof boarding.
5. Water proof insulation will be used on the OSB panels.
6. Polystyrene Styrofoam will be used will be used as heat insulation in-between two layers of OSB panels.
7. New metal hanging gutters and down-pipes will be fixed on the eaves.

C. MASONRY:

1. Demolished parts of the stone masonry will be rebuilt.
2. Brick completion on the stone masonry will be demolished and rebuilt with stone. Other brick completions around the openings will be preserved and repaired.
3. Structural cracks on the masonry will be stitched.
4. Missing and decayed jointing will be re-pointed with same technique by using lime based material.
5. Deposits on the stone surfaces will be cleaned with acetone solution by using fibre bristle brushes.
6. Lime mix mortar capping will be done on the stone masonry courtyard wall.
7. Missing parts of jointing will be completed by using lime mix mortar with hand tools.

D. WOODEN WORKS:

1. Deposits on the wooden surfaces will be cleaned.
2. Completely decayed wooden pieces will be removed.
3. Completion works will be done for the partially decayed pieces. All completion and replacement works will be done with the same type of materials.
4. All the wooden pieces will be impregnated.

- New timbers and the portables will be impregnated via immersion technique.
- Stable elements will be impregnated via injection and rubbing with foam rubber pieces.

5. Iron and stainless steel fittings will be used for the structural interventions.
6. Wooden pieces will be accustomed to the cracks.
7. Weak elements of the timber structure will be strengthened with additional timbers.

E. RENDER WORKS:

1. Cement mix renders will be mechanically stripped with hand tools.
2. Totally decayed render will be stripped mechanically.
3. A compatible mixture of mortar will be injected to partially detached lime mix renders in order to re-glue them.
4. A compatible clay mix mortar will be injected to partially detached mud mortars.
5. Patching existing lime plasters and rendering with lime render will be done by the appropriate mixture.
   - Base coat 2.5cm.
   - Finishing coat 1.5cm.
6. Patching existing mud plasters and rendering with mud mix render will be done by the appropriate mixtures.
   - Base coat 3.5cm.
   - Finishing coat 2.0cm.

F. CARVED STONE WORKS:

1. Missing carved stone pieces will be completed with same materials and details.
2. Cracked pieces will be repaired.
3. Broken pieces will be repaired.

4. Partially collapsed stone arches will be supported by timber scaffolding and their profiles will be aligned.

G. FINISHES:

1. Oil painted surfaces will be stripped with hot air gun.
2. Acrylic and plastic paints will be stripped.
3. Lime washes will be stripped.
4. Painting will be done by using mineral paints.

H. METAL WORKS:

1. Missing metal elements will be completed with same material and detail.
2. Mechanical cleaning will be done by sand blasting in low pressure.
3. Manual cleaning will be done by using organic solvents and alkaline detergents.
4. Ferrous metals will be threatened with anti-corrosive rust inhibitor before the painting process.

I. DRAINAGE SYSTEM:

1. A drainage system will be provided surrounds the building from outside.
2. A drainage system will be provided surrounds the building from inside of the courtyard walls.

J. ADDITIONS:

1. Screed and compacted soil cover will be replaced with baked brick tiles.

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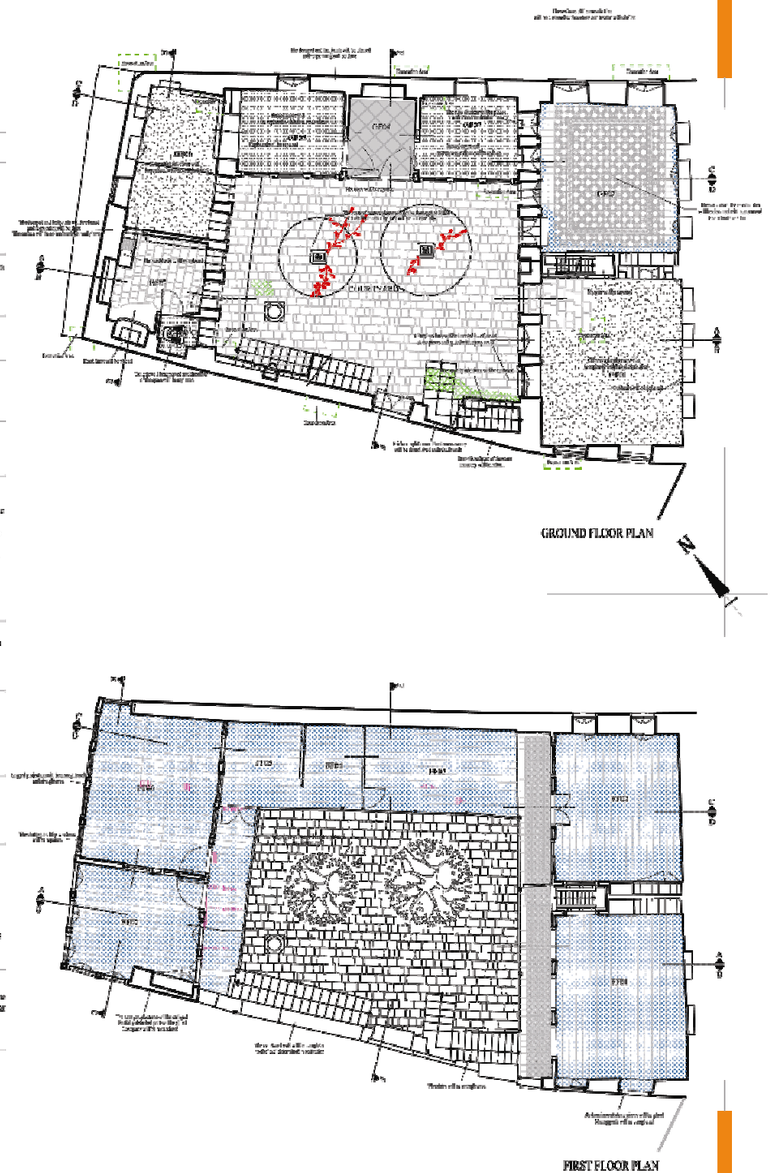
FACULTY OF ARCHITECTURE
M.S. PROGRAM in RESTORATION AND PRESERVATION OF HISTORICAL MONUMENTS

	PROBLEMS	INTERVENTIONS
	CRACKING	c3- Cracks on the masonry will be stitched c3a- Epoxy ad. limited line mortar injection for the cut and rubble stone masonry c3b- Fiberglass bars inserted into line cut stone pieces and epoxy resin glue d6- Wooden pieces will be accustomed in cracks or surfaces with fidelities
	LEANING	Both timber and stone element which have leaning problem will be supported with timber scaffolding. Linear elements will be re-straightened and straightened if curvilinear elements will be re-straightened and aligned.
	SWELLING	Wooden elements which have sagging problem will be supported with timber scaffolding and straightened by tech. tools.
	LOCAL BEARING FAILURE	Floors and openings which have local bearing failure will be supported with timber scaffolding. d7- Weak elements of the timber structure will be strengthened with the additional timbers
	COLLAPSE	c1- Demolished part of the stone masonry will be rebuilt f8- Partially collapse stone arches, will be supported with timber scaffolding and their profiles will be aligned
	BIOLOGICAL	b3- Missing tiles will be completed with the same sizes c1- Demolished part of the stone masonry will be rebuilt c4- Missing and decayed joints will be re-pointed with same technique by using lime mix mortar c5- Patching existing lime plasters and rendering with lime render will be done by the appropriate mixtures c6- Patching existing mud plaster and rendering with mud mix render will be done by the appropriate mixtures f1- Missing carved stone pieces will be completed with same materials and details h2- Missing metal elements will be completed with same materials and details
	CORROSION	h2- Mechanical cleaning will be done by sand blasting h3- Manual cleaning will be done by using organic solvents and alkaline detergents h4- Ferrous metals will be treated with anti-corrosive rust inhibitor before
	SOILS	a2- Totally decayed plasters will be stripped mechanically g1- Oil paint surfaces will be stripped with hot air gun g2- Acrylic and plastic paints will be stripped with appropriate mixtures of appropriate mixtures g3- Limewashes will be stripped with acetone and fibre bristle brushes
	SALINE EFFLORESCENCE	a1- Philia 6001 - Primal AC 33 mix mortar will be injected to partially detached lime mix renders will be re-glued partially detached lime mix renders c4- Primal AC 33 and clay mix mortar will be injected to
	FREEZE THAW BIOLOGICAL EFFLORESCENCE	b2- Traditional roof tiles will be stripped and washed with warm water blasting in low pressure g5- Deposits on the stone surfaces will be cleaned with acetone by using fibre bristle brushes d1- Deposits on the wooden surfaces will be cleaned with acetone h3- Manual cleaning will be done by using organic solvents and alcaline detergents.
	DEPOSITS	a5- Organic material as evergreen, weeds and other plant formations, permanent especially on the stone masonry and stone floor cover will be removed by using chemical agents. The other organisms such as mosses, fungis and lichens will be eliminated with biocide treatment



ground and first floor plans 1/50

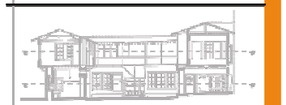
RESTORATION and REVITALIZATION PROJECT
OF HOUSE NO:1 in ZENGİNLER MAHALLESİ BÜYÜK ÇIKMAZ
ANTAKYA-HATAY

RESTORATION

INTERVENTIONS

FLOOR COVER PLANS

SCALE 1/50 | SHEET NO 1 SHEET



GENERAL INTERVENTION DECISIONS

A - REMOVALS:
* Incompatible materials on the building will be removed
* Poor quality additions will be removed
* Redundant materials will be removed
* Organic materials will be removed

B - ROOF:
* The original structure of the roof will be preserved and strengthened
* The original roof covering will be preserved and repaired
* The damaged or lost covering will be replaced with the materials which have the same characteristics
* The roof leveling will be provided with wooden material
* Water and heat insulation will be provided
* Rain water disposal system will be provided

C - MASONRY:
* The demolished parts of the stone masonry will be rebuilt
* The cracks will be stitched
* The lost joints will be re-pointed
* The deposits on stone pieces will be cleaned
* Capping will be provided on stone masonry courtyard walls

D - WOODEN WORKS:
* Surfaces of the wooden works will be cleaned
* The wooden pieces will be fixed or fitted against the wood having insects
* Partial replacements of the decayed pieces will be done
* Completely decayed pieces will be removed

E - RENDER WORKS:
* Cement mix plasters will be stripped
* Existing lime and mud mix renders will be repaired
* Missing parts of the plasters will be restored

F - CARVED STONE WORKS:
* Missing carved stone pieces such as sills, moulding and frames will be completed with the same material and detail

G - FINISHES:
* Paint stripping will be done on all the painted surfaces and the painted surfaces will be repaired with appropriate material

H - METAL WORKS:
* The metal pieces will be repaired and the missing parts will be completed

I - DRAINAGE SYSTEM:
* A plane water drainage system will be provided

J - RESEARCHES:
* The research excavation in small scale and separate points will be done on the ground.
* Paint and plaster stripping will be done in small scales at some certain places and corners.

DRAWINGS
CAĞDAŞ HALİT BORA

SUPERVISOR
ASSOC. PROF. DR. N. GÜL ASATEKİN

INTERVENTIONS DECISIONS

A - REMOVALS:
a1- Any roof covering other than classical Turkish tiles will be removed.
a2- Redundant metal pieces will be removed
a3- Redundant wooden pieces will be removed
a4- Redundant electricity cables will be removed
a5- Redundant sanitary installation pipes and fittings will be removed
a6- Organic materials as evergreen, weeds and other plant formations, permanent especially on the stone masonry and stone floor cover will be removed by using chemical agents. The other organisms such as mosses, fungis and lichens will be eliminated with biocide treatment

B - ROOF:
b1- Carpentry repairs for the roof structure will be done. Weak elements of the structure will be strengthened with the additional timbers
b2- Traditional roof tiles will be stripped and washed with warm water blasting in low pressure
b3- Missing tiles will be completed with the new ones
b4- Double layers oriented strand board (girth 11. mm.) will be used as roof boarding
b5- Water proof insulation Geotex. Membrain will be used on the first layer of OSB
b6- Polyurethane spray foam will be used as heat insulation with a minimum two layer of OSB
b7- New metal hanging gutters and downpipes will be fixed on the eaves

C - MASONRY:
c1- Demolished part of the stone masonry will be rebuilt.
c2- Back completion of the stone masonry will be demolished and rebuilt with same. Other brick completions or recent 40s openings will be removed and preserved
c3- Cracks on the masonry will be stitched
c3a- Epoxy ad. limited, lime mortar injection for the cut and rubble stone masonry
c3b- Fiberglass bars inserted into line cut stone pieces and epoxy resin glue
c4- Missing and decayed joints will be re-pointed with same technique by using lime mix mortar
c5- Deposits on the stone surfaces will be cleaned with acetone by using fibre bristle brushes
c6- Lime mix mortar capping will be done on the stone masonry courtyard wall
c7- Missing parts of Joloting will be completed by using lime mix mortar with hand tools
1/2 part lime putty + 1/2 part hydrolic lime + 2 part crushed stone # 1 part sand

D - WOODEN WORKS:
d1- Deposits on the wooden surfaces will be cleaned with acetone
d2- Completely decayed, wooden pieces will be removed
d3- Completion works will be done for the partially decayed pieces. All completion and replacement works will done with same type of material
d4- All of the wooden pieces will be impregnated with Protim WR 229 chemical
d5a- New finishes and panelling will be impregnated with intumescion
d5b- Smoke elements will be impregnated with injection and painting with foam rubber
d6- Iron and stainless steel fittings will be used for the structural interventions
d8- Wooden pieces will be accustomed to stucco on surfaces with fidelities
d7- Weak elements of the timber structure will be strengthened with the additional timbers

E - RENDER WORKS:
e1- Cement mix renders will be mechanically stripped with hand tools
e2- Totally decayed plasters will be stripped mechanically
e3- Philia 6001 - Primal AC 33 mix mortar will be injected to partially detached lime mix renders in order to re-glue them.
e4- Primal AC 33 and clay mix mortar will be injected to partially detached mud mortars
e5- Patching existing lime plasters and rendering with lime render will be done by the appropriate mixtures
e5a- Base coat (2,5 cm.):
1/2 part lime putty + 1/2 part hydrolic lime – 1 part crushed stone – 3 part sand
e5b- Finishing coat (1,5 cm.):
1/2 part lime putty + 1/2 part hydrolic lime – 1 part marble dust – 3 part sand
e6- Patching existing mud plasters and rendering with mud mix render will be done by the appropriate mixtures
e6a- Base coat (2,5 cm.):
1/2 part lime putty + 1 part clay + 1/2 part straw 1 part sand
e6b- Finishing coat (2 cm.):
1/2 part lime putty + 1 part clay + 2 part sand

F - CARVED STONE WORKS:
f1- Missing carved stone pieces will be completed with same materials and details
f2- Cracked pieces will be repaired with epoxy resin
f3- Broken pieces will be drilled and inserted by fiber glass bars.
They will conditioned and glued with epoxy resin.
f8- Partially collapsed stone arches will be supported with timber scaffolding and their profiles will be aligned

G - FINISHES:
g1- Oil paint surfaces will be stripped with hot air gun
g2- Acrylic and plastic paints will be stripped with appropriate mixtures of:
EDTA
Ammonium Bicarbonate
Carbony Methyl Cellulose
by using plastic scrapers and medium hard plastic brushes
g3- Limewashes will be stripped with acetone and fibre bristle brushes
g4- Paintings will be done with mineral prints

H - METAL WORKS:
h1- Missing metal elements will be completed with same material and details
h2- Mechanical cleaning will be done by sand blasting
h3- Manual cleaning will be done by using organic solvents and alcaline detergents
h4- Ferrous metals will be treated with anti-corrosive rust inhibitor before the painting process

I - DRAINAGE SYSTEM:
i1 - A drainage system will be provided surrounds the building from outside with clay/tile pipes.
i2 - A drainage system will be provided surrounds the building from inside of the courtyard with ceramic pipes

J - ADDITION:
j1- Stained and compacted soil cover will be replaced with baked brick tiles

Illustration 66: Restoration – Interventions – Floor Cover Plans

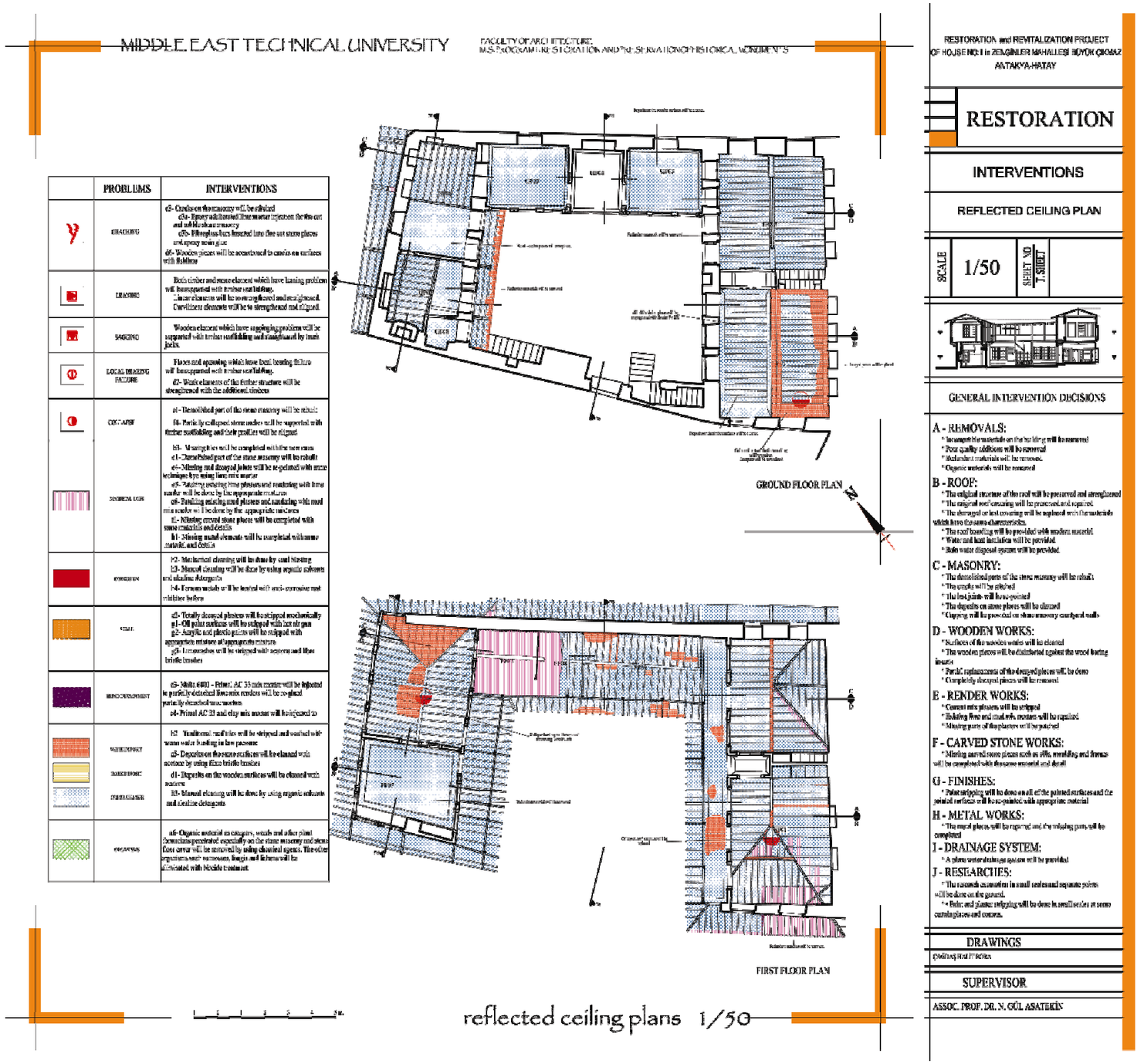
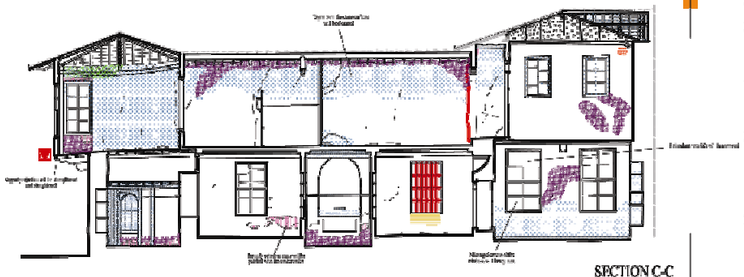
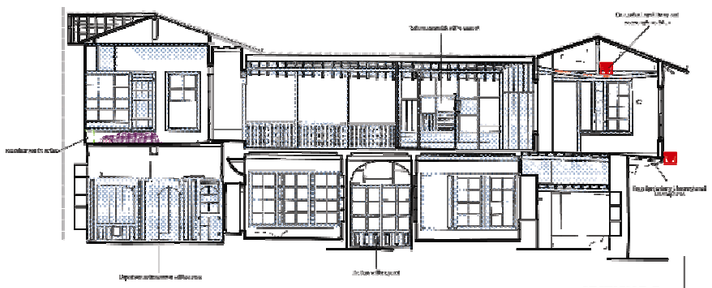


Illustration 67: Restoration – Interventions – Reflected Ceiling Plans

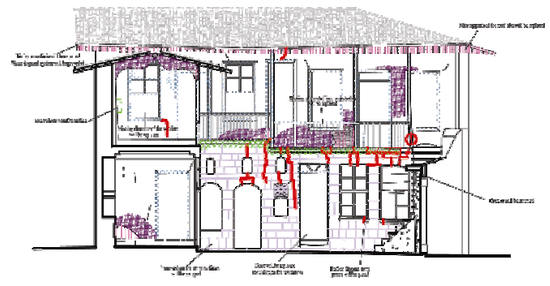
	PROBLEMS	INTERVENTIONS
	STRENGTH	e3- Cracks on the masonry will be stitched. e3a- Epoxy reinforced lime mortar injection for the cut and rubble stone masonry e3b- Fiberglass bars inserted into fine-cut stone pieces and epoxy resin glue e5- Wooden pieces will be reconstructed to meshes on surfaces with fidelities
	LEANING	Both the base and stone element which have leaning problem will be supported with timber scaffolding. Linear elements will be strengthened and straightened. Curvilinear elements will be to strengthened and aligned.
	SWELLING	Wooden element which have supporting problem will be supported with timber scaffolding and straightened by truck jacks.
	LOCAL BEARING FAILURE	Floors and openings which have local bearing failure will be supported with timber scaffolding. e2- Weak elements of the timber structure will be strengthened with the additional timbers
	COLLAPSE	e1- Demolished part of the stone masonry will be rebuilt f4- Partially collapsed stone meshes will be supported with timber scaffolding and their profiles will be aligned.
	WEATHERING	b3- Missing tiles will be completed with the same stone e1- Demolished part of the stone masonry will be rebuilt e6- Missing and decayed joints will be re-pointed with same technique by using the new mortar e3- Building existing lime plasters and rendering with lime render will be done by the appropriate measures e4- Patching existing roof plasters and rendering with roof mix render will be done by the appropriate measures f2- Missing, eroded stone pieces will be completed with same materials and details h1- Missing metal elements will be completed with same material, size, details
	BIOLOGICAL	b2- Mechanical cleaning will be done by steel blocking b3- Manual cleaning will be done by using organic solvents and micelline detergents b4- Gaseous media will be treated with anti- corrosive gas inhibitor before
	DUST	g2- Totally decayed pieces will be stripped mechanically g1- Oil paint surfaces will be stripped with hot air gun g2- Acrylic and plastic pieces will be stripped with appropriate solvents or appropriate mixture g3- Limewashes will be stripped with steam and fibre bristle brushes
	MECHANICAL DAMAGE	e3- Mortar (CL 90) - Plaster(AC 35) mixtures will be injected to partially detached stone mix meshes will be re-placed partially plastered may mortars. e4- Plaster(AC 35) and clay mix mortar will be injected to
	WATER DAMAGE	b2- Traditional roof tiles will be stripped and washed with warm water blasting at low pressure e3- Deposits on the stone surfaces will be cleaned with mechanic by using fiber bristle brushes d1- Deposits on the wooden surfaces will be cleaned with mechanic b2- Manual cleaning will be done by using organic solvents and micelline detergents
	BIOLOGICAL	a6- Organic material, as evergreen, weeds and other plant formations penetrated especially on the stone masonry and stone floor cover will be removed by using chemical agents. The other organisms such as mosses, fungals and lichens will be mechanically with brass tools instrument



SECTION C-C



SECTION D-D



SECTION F-F

sections 1/50

RESTORATION and REVITALIZATION PROJECT OF HOUSE NO 1 in ZENGİLLER MAHALLESİ BÜYÜK ÇIKMAZ ANTAKYA-HATAY

RESTORATION

INTERVENTIONS

ELEVATIONS

SCALE 1/50 SHEET NO T. SHEET

GENERAL INTERVENTION DECISIONS

A - REMOVALS:
* Incompatible materials on the building will be removed
* Post existing additions will be removed
* Redundant materials will be removed
* Organic materials will be removed

B - ROOF:
* The original structure of the roof will be preserved and strengthened
* The original roof covering will be preserved and repaired
* The damaged or lose wooding will be replaced with the materials which have the same characteristics.
* The roof levelling will be provided with modern material
* Water and heat insulation will be provided
* Rain water disposal system will be provided

C - MASONRY:
* The demolished parts of the stone masonry will be rebuilt
* The cracks will be stitched
* The lost joints will be re-pointed
* The deposition stone pieces will be cleaned
* Capping will be provided on stone masonry and party walls

D - WOODEN WORKS:
* Surfaces of the wooden works will be cleaned
* The wooden pieces will be strengthened against the wood boring insects
* Partial replacements of the decayed pieces will be done
* Completely decayed pieces will be renewed

E - RENDER WORKS:
* Cementwork plasters will be stripped
* Existing lime and mud mix mortars will be repaired
* Missing parts of the plasters will be patched

F - CARVED STONE WORKS:
* Missing carved stone pieces such as lintels, moulding and friezes will be completed with the same material and detail

G - FINISHES:
* Paint stripping will be done on all of the painted surfaces and the painted surfaces will be re-painted with appropriate material

H - METAL WORKS:
* The metal pieces will be repaired and the missing parts will be completed.

I - DRAINAGE SYSTEM:
* A plane water drainage system will be provided

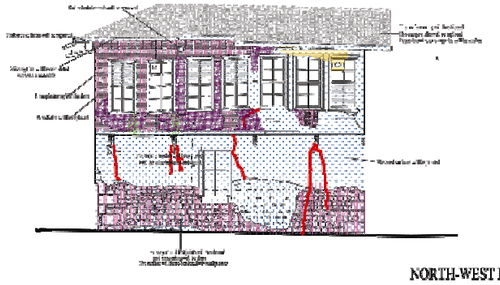
J - RESEARCHES:
* The archeological excavation in small scales and separate points will be done on the ground.
* Paint and plaster stripping will be done in small scales at some certain places and corners.

DRAWINGS
ÇAĞDAŞ BALTI SEMRA

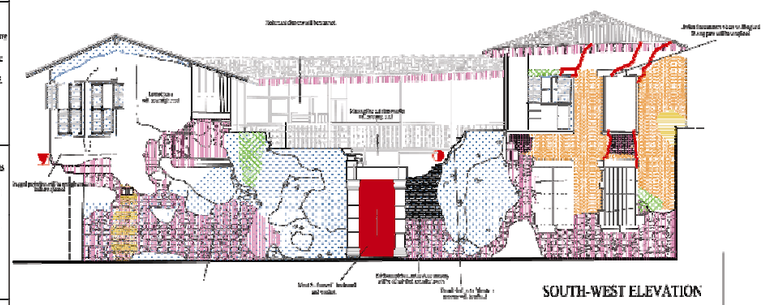
SUPERVISOR
ASSOC. PROF. DR. N. GÜL ASATEKİN

Illustration 68: Restoration – Interventions – Sections 1

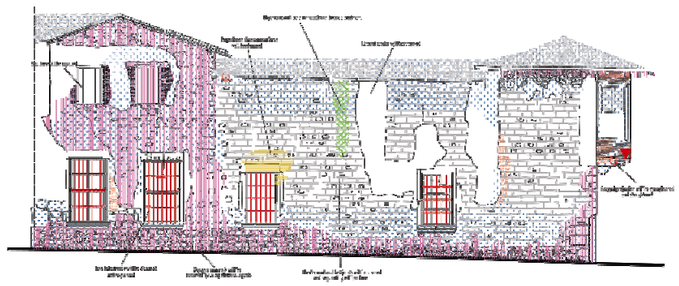
	PROBLEMS	INTERVENTIONS
	CRACKING	c2- Cracks on the masonry will be stitched c2a- Epoxy +Siliceous lime mortar injection for the cut masonry stone masonry c2b- Fiberglass bars inserted into fine cut stone pieces and epoxy resin glue c6- Wooden pieces will be inserted to cracks or surfaces with flatstone
	LEANING	Both timber and stone elements which have leaning problem will be supported with timber scaffolding. Lintey elements will be strengthened and straightened. Cornice/eaves elements will be re-straightened and aligned.
	BOWING	Wooden elements which have suggesting problem will be supported with timber scaffolding and straightened by truck jacks.
	LOCAL BEARING FAILURE	Floors and opening width have local buckling failure will be supported with timber scaffolding. d7- Week elements of the timber elements will be strengthened with the additional timbers
	COLLAPSE	c1- Demolished part of the stone masonry will be rebuilt 2- Partially collapsed stone arches will be supported with timber scaffolding and stone pavilion will be aligned
	MATERIAL LOSS	b3- Missing tiles will be completed, with the new ones c1- Demolished part of the stone masonry will be rebuilt c4- Missing and damaged joints will be re-pointed with same technique (see using lime mix mortar c5- Patching existing lime plasters and rendering with lime render will be done by the appropriate mixtures c6- Patching existing mud plasters and rendering with mud mix render will be done by the appropriate mixtures f1- Missing carved stone pieces will be completed with same materials and details 3a- Missing metal elements will be completed with same material and details.
	DEGRADATION DECAY	b2- Mechanical cleaning will be done by steel blocking b3- Manual cleaning will be done by using organic solvents and alkaline detergents b4- Ferrous metals will be coated with anti- corrosive rust inhibitor before c2- Totally damaged plasters will be stripped mechanically g1- Oil paint surfaces will be stripped with hot air gun g2- Acrylic and plastic paints will be stripped with appropriate mixture of appropriate mixture g3- Limewashes will be stripped with acetone and fibre bristle brushes
	ALGAE GROWTH	c3- Mix in 600 l - Primal AC33 mix mortar will be injected to partially disturbed lime mix renders will be re-glued partially detached mud mortars c4- Primal AC33 and clay rain mortar will be injected in
	WATER DEPOSIT DARK DEPOSIT CALCAREOUS	b2- Traditional roof tiles will be stripped and washed with warm water blasting in low pressure c5- Deposits on the stone surfaces will be cleaned with laitance by using fibre bristle brushes d1- Deposits on the wooden surfaces will be cleaned with acetone b3- Manual cleaning will be done by using organic solvents and alkaline detergents
	BIOLOGICAL	a5- Organic materials as mosses, weeds and other plant formations generated especially on the stone masonry and stone floor eaves will be removed by using chemical agents. The other organisms such as mosses, fungi and lichens will be eliminated with biocide treatment



NORTH-WEST ELEVATION



SOUTH-WEST ELEVATION



NORTH-EAST ELEVATION

elevations 1/50

RESTORATION and REVITALIZATION PROJECT OF HOUSE NO:1 in ZENGİNLER MAHALLESİ BÜYÜK ÇIKMAZ ANTAKYA-HATAY

RESTORATION

INTERVENTIONS

ELEVATIONS

SCALE 1/50 SHEET NO T. SHEET

GENERAL INTERVENTION DECISIONS

A - REMOVALS:
* Incompatible materials on the building will be removed
* Poor quality additions will be removed
* Rubbish/ materials will be removed
* Organic materials will be removed

B - ROOF:
* The original structure of the roof will be preserved and strengthened
* The original roof covering will be preserved and repaired.
* The damaged or lost coverings will be replaced with the materials which have the same characteristics.
* The roof framing will be provided with modern material.
* Water and heat insulation will be provided.
* Rain water disposal system will be provided.

C - MASONRY:
* The demolished parts of the stone masonry will be rebuilt
* The cavities will be stitched
* The lost joints will be re-pointed
* The deposits on stone pieces will be cleaned
* Capping will be provided on stone masonry courtyard walls

D - WOODEN WORKS:
* Surfaces of the wooden works will be cleaned
* The wooden pieces will be chamfered against the wood burning insects
* Partial replacements of the decayed pieces will be done
* Completely decayed pieces will be renewed

E - RENDER WORKS:
* Cement mix plasters will be stripped.
* Existing lime and mud mix mortars will be repaired
* Missing parts of the plasters will be patched

F - CARVED STONE WORKS:
* Missing carved stone pieces such as sills, moulding and frames will be completed with the same material and detail

G - FINISHES:
* Paint stripping will be done on all of the painted surfaces and the painted surfaces will be re-painted with appropriate material

H - METAL WORKS:
* The metal pieces will be repaired and the missing parts will be completed

I - DRAINAGE SYSTEM:
* A plane water drainage system will be provided

J - RESEARCHES:
* The research excavation in small scales and appropriate points will be done on the ground.
* Paint and plaster stripping will be done in small scales at some certain places and corners.

DRAWINGS
CAĞDAŞ HALİT ROBA

SUPERVISOR
ASSOC. PROF. DR. M. GÜL ASATEKİN

Illustration 69: Restoration – Interventions – Elevations

5.5. NEW FUNCTION

5.5.1. EVALUATION OF THE SPACES IN THE BUILDING

Evaluation of the spaces in the building has been described one by one in terms of the quality of light and ventilation, wealth of architectural elements in the space, structural and material conditions and their orientations. The spatial features related with the use of spaces have also been described.

- **COURTYARD**

The courtyard of the building is the richest space with its architectural elements, ground cover, two trees and façades which enclose it from four sides.

- **SPACE GF01**

Use of Space: Living
Lightening: Four windows located on the walls of the space allow passing daylight directly to the room.
Ventilation: The ventilation of the room can easily be provided by the windows.
Architectural Elements: The space is remarkably wealthy with its cupboards designed as a whole interior façade. The ceiling of the room has been covered and the main beams are profiled. It can be entered via ”mabein” located in one of the façade consist of cupboards. There is “seki altı” at the entrance of the room.
Structural and Material Condition: It is in good condition if the structural condition is taken into consideration. But the ceiling cover of the façade has been broken or bended at some parts. The finishing materials of the room are unfortunately in bad condition.
Orientation: The entrance of the extraverted room is from courtyard.

- **SPACE GF02**

Use of Space: Living
Lightening: Three windows located on the walls of the space allow passing daylight directly to the room. In addition, there are two windows which open out to adjacent space and it takes light indirectly from this room.
Ventilation: The ventilation of the room can easily be provided by the windows.
Architectural Elements: The space has almost same architectural elements with GF01. However, the floor of the room has been covered with figured mosaic tiles.
Structural and Material Condition: the structural condition of the room is good but the finishing materials have been damaged.
Orientation: The entrance of the extraverted room is from courtyard.

- **SPACE GF03**

Use of Space: Living
Lightening: Four windows located on the walls of the space allow passing daylight directly to the room.
Ventilation: The ventilation of the room can easily be provided by the windows.
Architectural Elements: The space has simply been designed.
Structural and Material Condition: The structural condition of the space is good whereas the finishing materials are deteriorated.
Orientation: The room is entered from another room and it is introverted.

- **SPACE GF04**

Use of Space: Circulation
Lightening: The room gets light from the glazed parts of its door and the dead light above the door.
Ventilation: The ventilation of the room can only be provided by the windows.
Architectural Elements: The space has simply been designed.

Structural and Material Condition: The structural condition of the space is good whereas the finishing materials are deteriorated.
Orientation: The room is entered directly from the courtyard and it is extraverted.

- **SPACE GF05**

Use of Space: Living
Lightening: Four windows located on the walls of the space allow passing daylight directly to the room.
Ventilation: The ventilation of the room can easily be provided by the windows.
Architectural Elements: The space has simply been designed and has similar architectural features with GF03.
Structural and Material Condition: The structural condition of the space is good whereas the finishing materials are deteriorated.
Orientation: The room is entered from another room and it is introverted.

- **SPACE GF06**

Use of Space: Storage
Lightening: Two windows located on the walls of the room get direct daylight. There are three bed-lights which get indirect light from the other rooms.
Ventilation: The ventilation of the room can be provided by the windows.
Architectural Elements: The space is rich with its architectural elements.
Structural and Material Condition: It is in bad condition either structurally or in material scale.
Orientation: The entrance of the extraverted room is from courtyard.

- **SPACE GF07**

Use of Space: Service
Lightening: There is only one windows and it is not enough for the lighting.
Ventilation: The ventilation of the room is not in good quality.

Architectural Elements: The space has architectural element with either poor or good quality.
Structural and Material Condition: The structural condition of the space is good whereas the materials are deteriorated.
Orientation: The entrance of the extraverted room is from courtyard.

- **SPACE FF01**

Use of Space: Living
Lightening: Four windows located on the walls of the space na a small dead light above the door allow passing daylight directly to the room.
Ventilation: The ventilation of the room can easily be provided by the windows.
Architectural Elements: The space has been designed with simple architectural elements.
Structural and Material Condition: It is in bad condition either in material scale or structurally.
Orientation: The entrance of the extraverted room is from the circulation corridor which looks through the courtyard.

- **SPACE FF02**

Use of Space: Living
Lightening: Four windows located on the walls of the space na a small dead light above the door allow passing daylight directly to the room.
Ventilation: The ventilation of the room can easily be provided by the windows.
Architectural Elements: It has similar properties with FF01 space.
Structural and Material Condition: It is in bad condition either in material scale or structurally.
Orientation: The entrance of the extraverted room is from the circulation corridor which looks through the courtyard.

- **SPACE FF03**

Use of Space: Circulation
Lightening: The lighting quality of the room is good.
Ventilation: It is very well ventilated.
Architectural Elements: The space has been designed simply.
Structural and Material Condition: It is in good condition structurally. On the other hand, finishing materials are deteriorated.
Orientation: It looks through the courtyard and extraverted.

- **SPACE FF04**

Use of Space: Storage
Lightening: The lighting quality of the room is good.
Ventilation: It is very well ventilated.
Architectural Elements: The space has been designed simply.
Structural and Material Condition: It is in good condition structurally. On the other hand, finishing materials are deteriorated.
Orientation: It looks through the courtyard and extraverted.

- **SPACE FF05**

Use of Space: Storage
Lightening: The lighting quality of the room is good.
Ventilation: It is very well ventilated.
Architectural Elements: The space has been designed simply.
Structural and Material Condition: It is in good condition structurally. On the other hand, finishing materials are deteriorated.
Orientation: It looks through the courtyard and extraverted.

- **SPACE FF06**

Use of Space: Living

Lightening: Eight windows located on the walls of the space allow passing daylight directly to the room.
Ventilation: The ventilation of the room can easily be provided by the windows.
Architectural Elements: The space is remarkably wealthy with its architectural features.
Structural and Material Condition: It is in bad condition either in material scale or structurally.
Orientation: The entrance of the extraverted room is from the circulation corridor which looks through the courtyard.

- **SPACE FF07**

Use of Space: Living
Lightening: Eight windows located on the walls of the space allow passing daylight directly to the room.
Ventilation: The ventilation of the room can easily be provided by the windows.
Architectural Elements: The space is remarkably wealthy with its architectural features.
Structural and Material Condition: It is in bad condition either in material scale or structurally.
Orientation: The entrance of the extraverted room is from the circulation corridor which looks through the courtyard.

- **CIRCULATION SPACES AT THE FIRST FLOOR**

The circulation spaces located at the first floor of the building have similar architectural properties. The one at the south-east mass has figured mosaic tile floor covering whereas the other one has timber boards. On the other hand, the balustrades of the north-west are of ornamented timber whereas the other one have simple iron rails. Both of them are well ventilated and lightened with daylight. They look through the courtyard.

Illustration 70: Analyses of Spaces

5.5.2. DEFINITION OF THE NEW FUNCTION

As is stated above in evaluation stages, the building is located in the middle of very active tourist and religious axes. In addition, it will be the first building which gets an extensive restoration in the area. Hence, a public use for the building has been determined and the probable needs of the city have been revised.

As is well known, Antakya is one of the important cities which have so many archaeological sites and excavations in its borders. The museum of the city is very famous with its objects. It has the unique examples of especially mosaic findings. The museum campus has been used above its capacity to exhibit and store all the objects that it has. Furthermore, its capacity is not enough for the conservation works of these findings. So many numbers of objects can not be exhibited and they are kept in storages.

In light of foregoing, the building has been planned as a conservation laboratory which gives service to the museum and a small exhibition area for the objects where they have repaired. With this way, sustainable maintenance can also be ensured for the building itself after restoration executions.

This new function gives building the opportunity to exhibit itself to anyone interests, not only to its users. It is aimed to put this building into centre of interest with nowadays increasing curiosity to cultural heritage. It is also a big chance for either conserving or exhibiting cultural heritage in another cultural heritage.

After determination of the new function, an organisation scheme has been prepared according to the needs of a small scaled conservation laboratory with exhibition facilities by considering the capacity of the building. Thus, the needs have been designated as follows;

- A space for conservation of timber objects
- A space for conservation of stone and mosaic objects
- A space for conservation of metal objects
- A space for conservation of ceramic and glass objects
- A space as a small library
- A space for administration
- Exhibition areas
- A space as storage
- Kitchen
- WC
- Café

In respect of the needs, the spaces of the building have been arranged. The courtyard of the building has been kept as hearth of the building like its previous use. It is utilized as the centre of circulation and café by considering the climatic conditions of this hot region. The authentic services spaces have been used with their original functions. So, the kitchen has been placed to space coded as GF07 and storage coded as GF06 in survey drawings. GF01 space has been planned to give service to conservation of timber objects whereas the GF02 for stone and metal findings. The entire north-east mass of the building has been designed for exhibiting facilities. Space FF01 has been planned to be used for conservation of ceramic and glass objects. FF02 has metal objects to be repaired. The library and administration have been placed into the spaces located at the first floor of north-west mass.

5.5.3. NEW INSTALLATIONS RELATED WITH NEW FUNCTION

- **ELECTRICITY – ILLUMINATION**

Electrical wiring will be passed inside of the fire-proof rectangular cable channels placed on the skirting levels. There will not be any cable inside of the plasters or the timber pieces. All the components of the illumination will be provided with portable floor lamps. Small projectors will be placed on the

ground to illuminate the courtyard façades of the building. The main electricity box will be placed under the double flight stone stair.

- **HEATING – VENTILATION**

Heating of the spaces will be provided by using small portable heating units powered by electricity. Ventilation will be kept natural as in the original use of the building.

- **SANITARY SYSTEM**

Clean water supply of the building will be provided by using polypropylene water pipes. It will only be placed into kitchen and WC. The original wash basin on the courtyard wall will have clean water supply to be used. There will not be any water supply for the other spaces of the building in no wise.

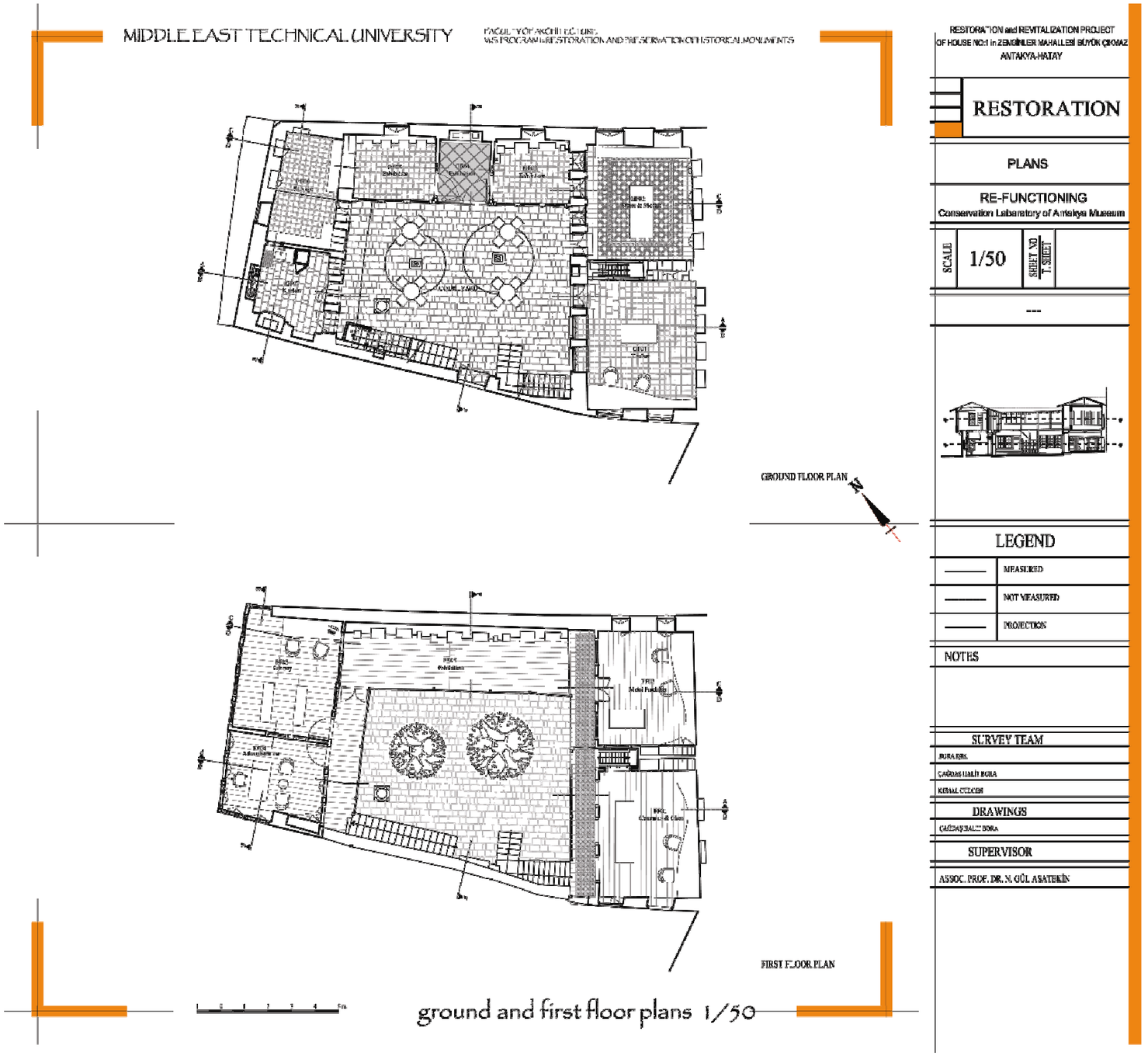


Illustration 71: Restoration – New Function - Plans

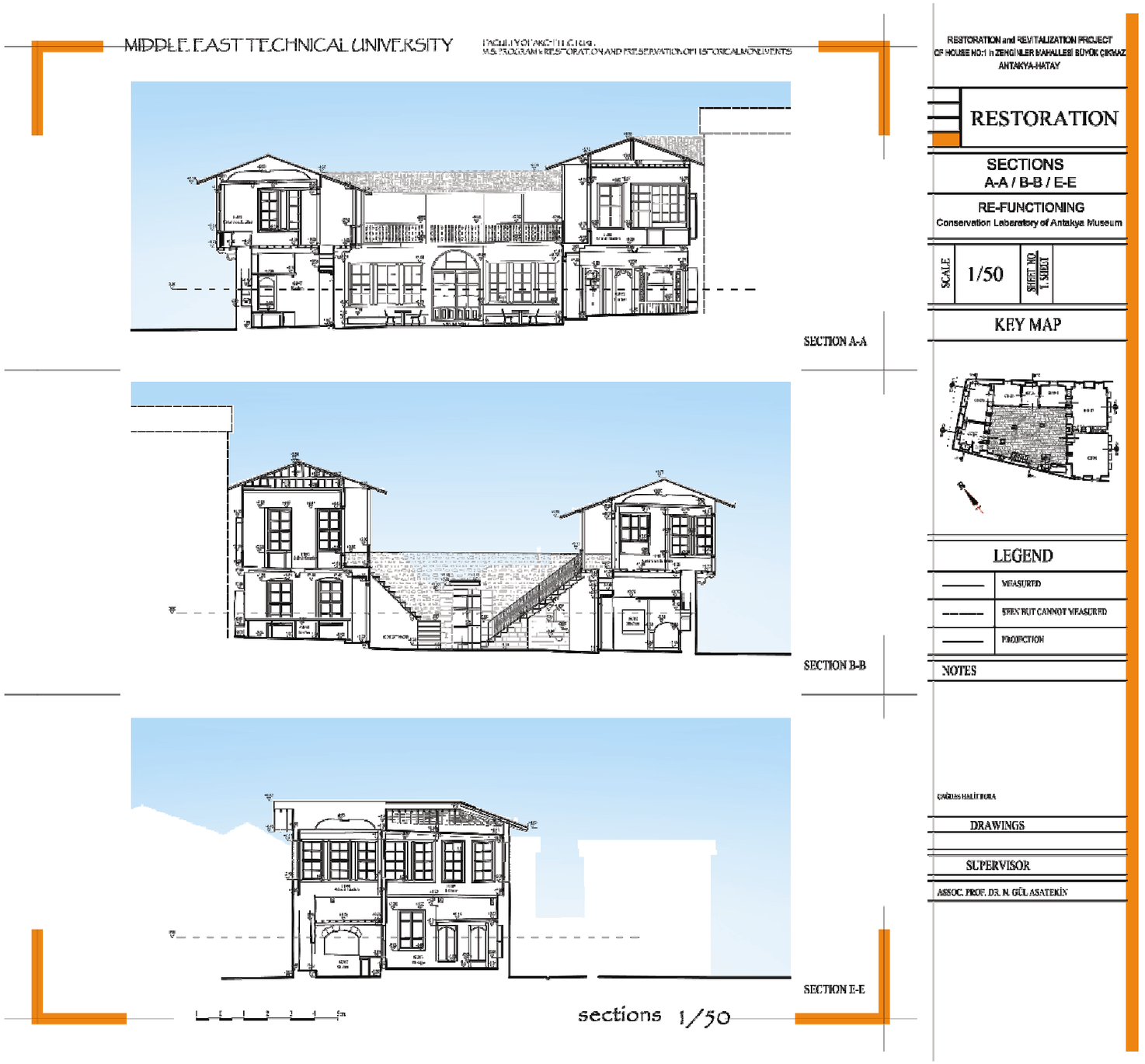


Illustration 72: Restoration – New Function – Sections 1

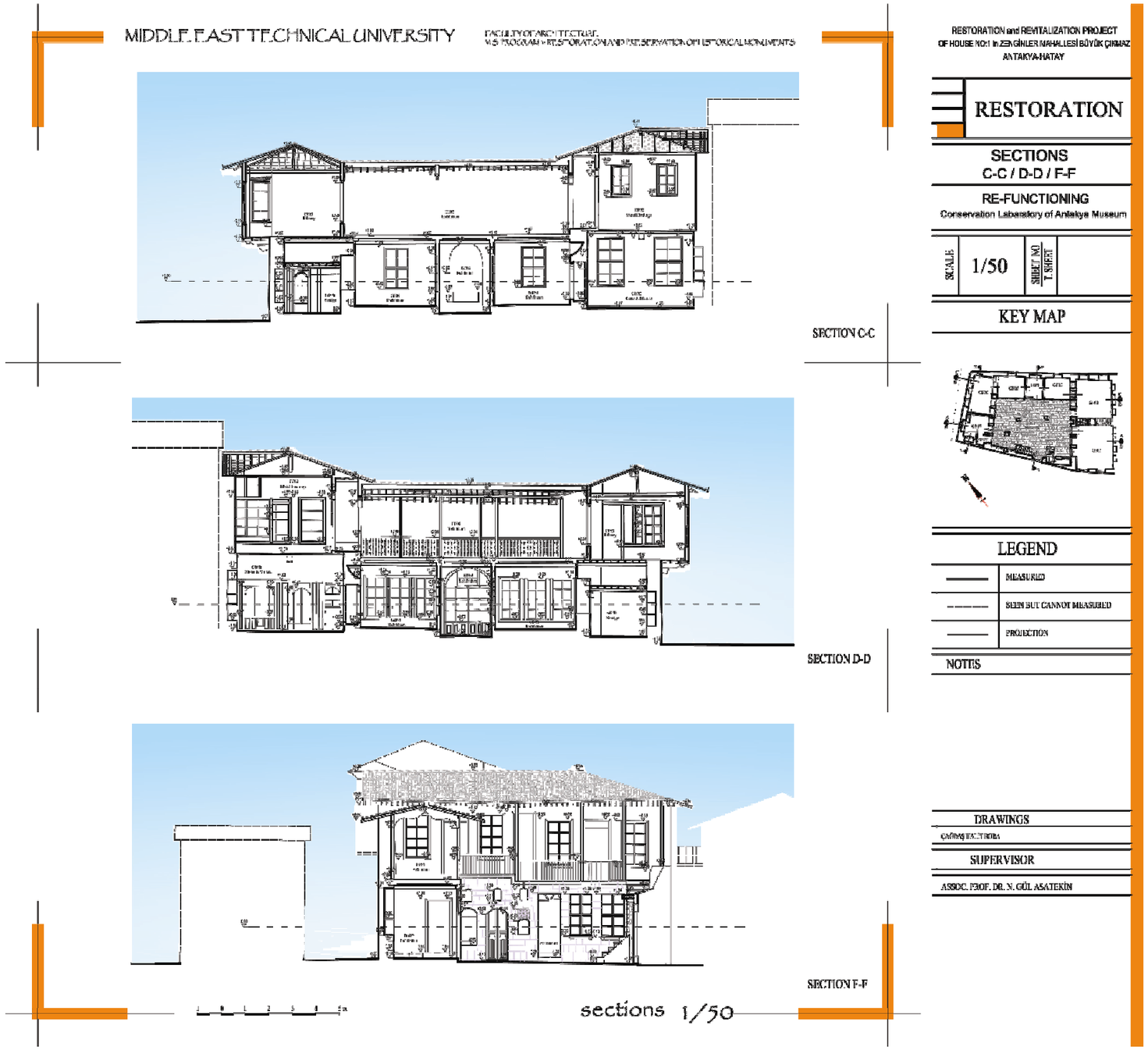


Illustration 73: Restoration – New Function – Sections 2

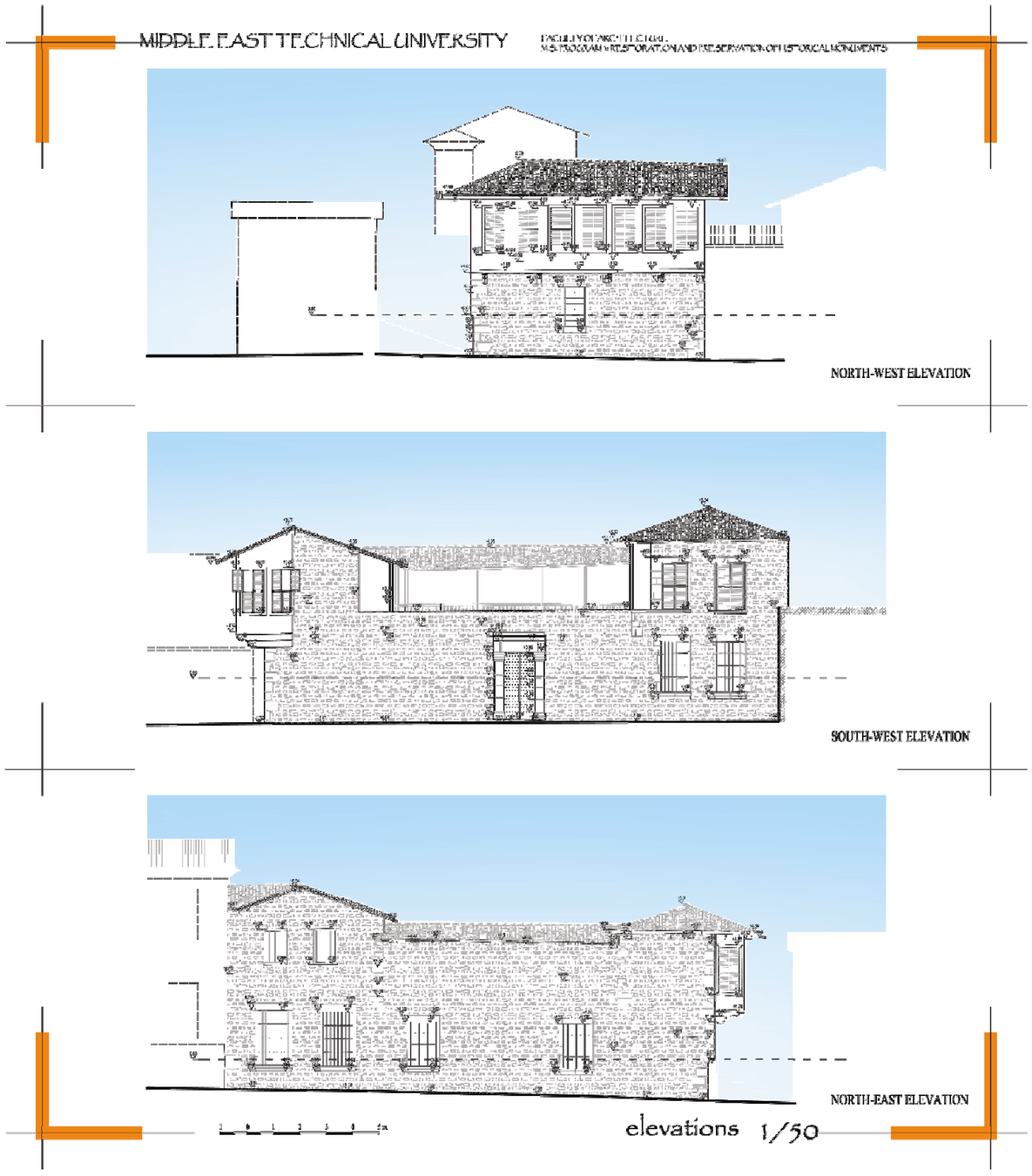


Illustration 74: Restoration – New Function - Elevations

CHAPTER 6

CONCLUSION

With this thesis, it is aimed to preserve one of the important houses of traditional urban fabric of Antakya. Moreover, even the building subjected for this study is not a unique example among the traditional houses in Antakya; it is so clear that restoration of this remarkably valuable building can easily be a model for the other buildings which have the similar values and problems.

As a result of the proposed new function which is conservation laboratory, a sustainable maintenance supposed to be ensured for the building itself after restoration executions. Furthermore, this function gives the opportunity to monitor the results of the project both for the building itself and the effects of it for its environment.

In conclusion, it is proposed to be put a plan for the monitoring process of the restoration executions which can be controlled periodically by the permanent users of the building. This process can give chance to determine the effects of executions to the building. Thus, adverse effects of the techniques and the materials used in the restoration can be analyse by the advance provided by the laboratory itself and be reported. By thinking of this process as a long-term study, the results of the work can be a scientific guide for the further restoration works which will be done in this territory.

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APPENDIX

Table 13: Restoration – Problems and Interventions

	PROBLEMS	INTERVENTIONS
	CRACKING	c3- Cracks on the masonry will be stitched c3a- Epoxy adulterated lime mortar injection for the cut and rubble stone masonry c3b- Fibreglass bars inserted into fine cut stone pieces and epoxy resin glue d6- Wooden pieces will be accustomed to cracks on surfaces with fishlime
	LEANING	Both timber and stone element which have leaning problem will be supported with timber scaffolding. Linear elements will be to strengthened and straightened. Curvilinear elements will be to strengthened and aligned.
	SAGGING	Wooden element which have sagginging problem will be supported with timber scaffolding and straightened by truck jacks.
	LOCAL BEARING FAILURE	Floors and openning which have local bearing failure will be supported with timber scaffolding. d7- Weak elements of the timber structure will be strenghtened with the additional timbers
	COLLAPSE	c1- Demolished part of the stone masonry will be rebuilt f8- Partially collapsed stone arches will be supported with timber scaffolding and their profiles will be aligned
	MATERIAL LOSS	b3- Missing tiles will be completed with the new ones c1- Demolished part of the stone masonry will be rebuilt c4- Missing and decayed joints will be re-pointed with same technique bye using lime mix mortar c5- Patching existing lime plasters and rendering with lime render will be done by the appropriate mixtures c6- Patching existing mud plasters and rendering with mud mix render will be done by the appropriate mixtures f1- Missing carved stone pieces will be completed with same materials and details h1- Missing metal elements will be completed with same material and details
	CORROSION	h2- Mechanical cleaning will be done by sand blasting h3- Manual cleaning will be done by using organic solvents and alcaline detergents h4- Ferrous metals will be treated with anti- corrosive rust inhibitor before
	SCALE	e2- Totally decayed plasters will be stripped mechanically g1- Oil paint surfaces will be stripped with hot air gun g2- Acrylic and plastic paints will be stripped with appropriate mixture of:appropriate mixture g3- Limewashes will be stripped with acetone and fibre bristle brushes
	BLIND DETACHMENT	e3- Multa 6001 - Primal AC 33 mix mortar will be injected to partially detached lime mix renders will be re-glued partially detached mud mortars e4- Primal AC 33 and clay mix mortar will be injected to
  	WHITE DEPOSIT DARK DEPOSIT COLOR CHANGE	b2- Traditional roof tiles will be stripped and washed with warm water blasting in low pressure e5- Deposits on the stone surfaces wil be cleaned with acetone by using fibre bristle brushes d1- Deposits on the wooden surfaces will be cleaned with acetone h3- Manual cleaning will be done by using organic solvents and alcaline detergents
	ORGANISMS	a6- Organic material as creepers, weeds and other plant formations penetrated especially on the stone masonry and stone floor cover will be removed by using chemical agents. The other organisms such as mosses, fungis and lichens will be eliminated with biocide treatment

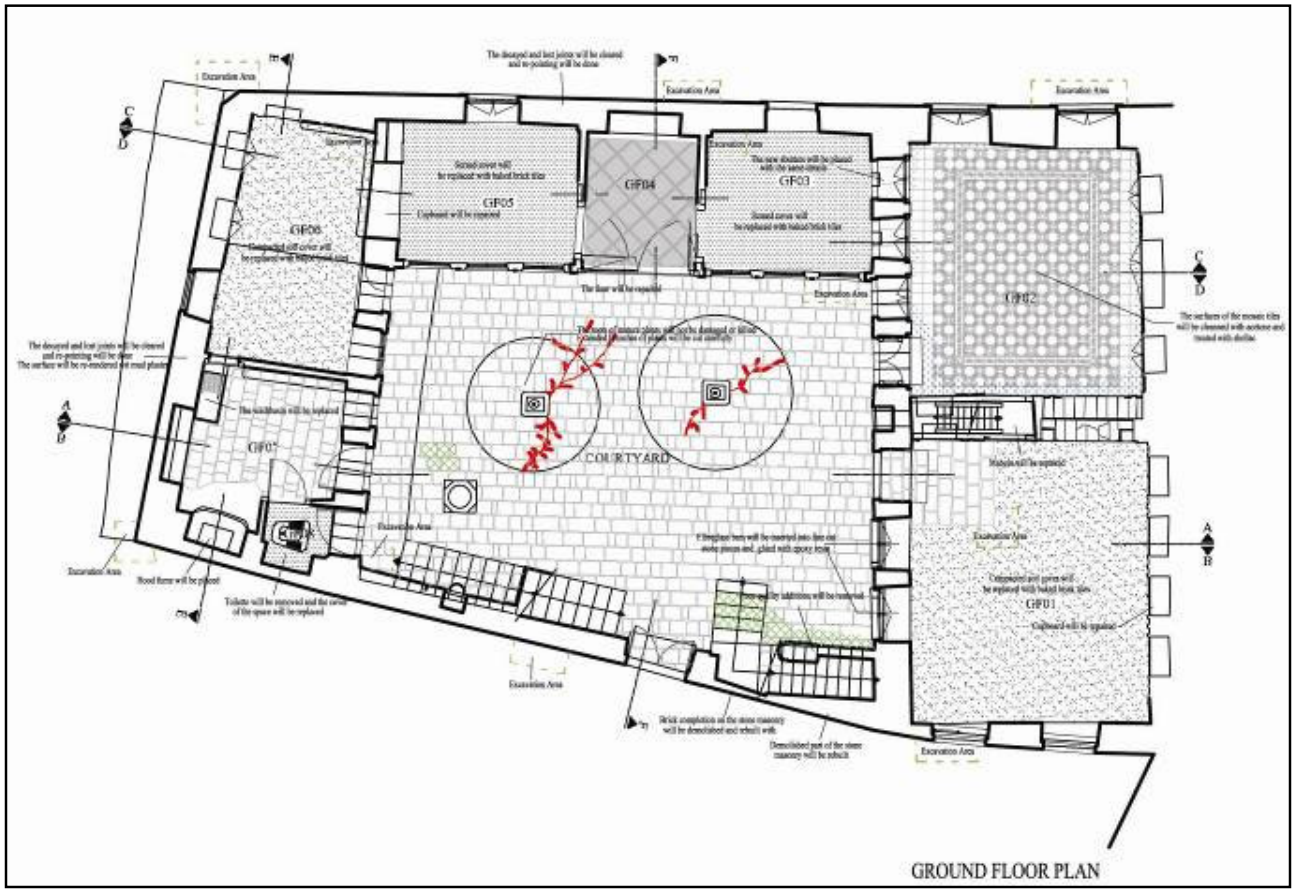

Illustration 75: Intervention Decisions – Ground Floor Plan

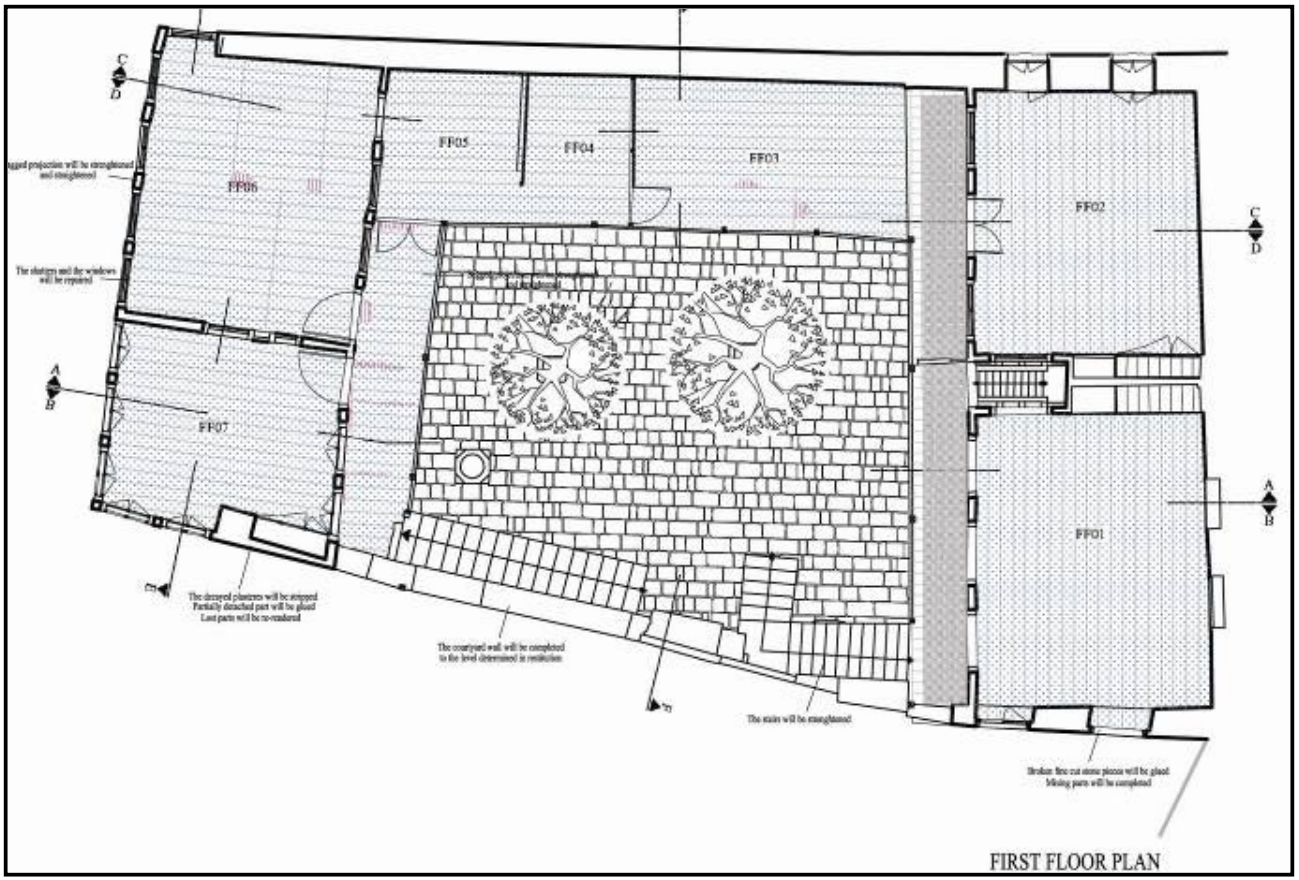

Illustration 76: Intervention Decisions – First Floor Plan

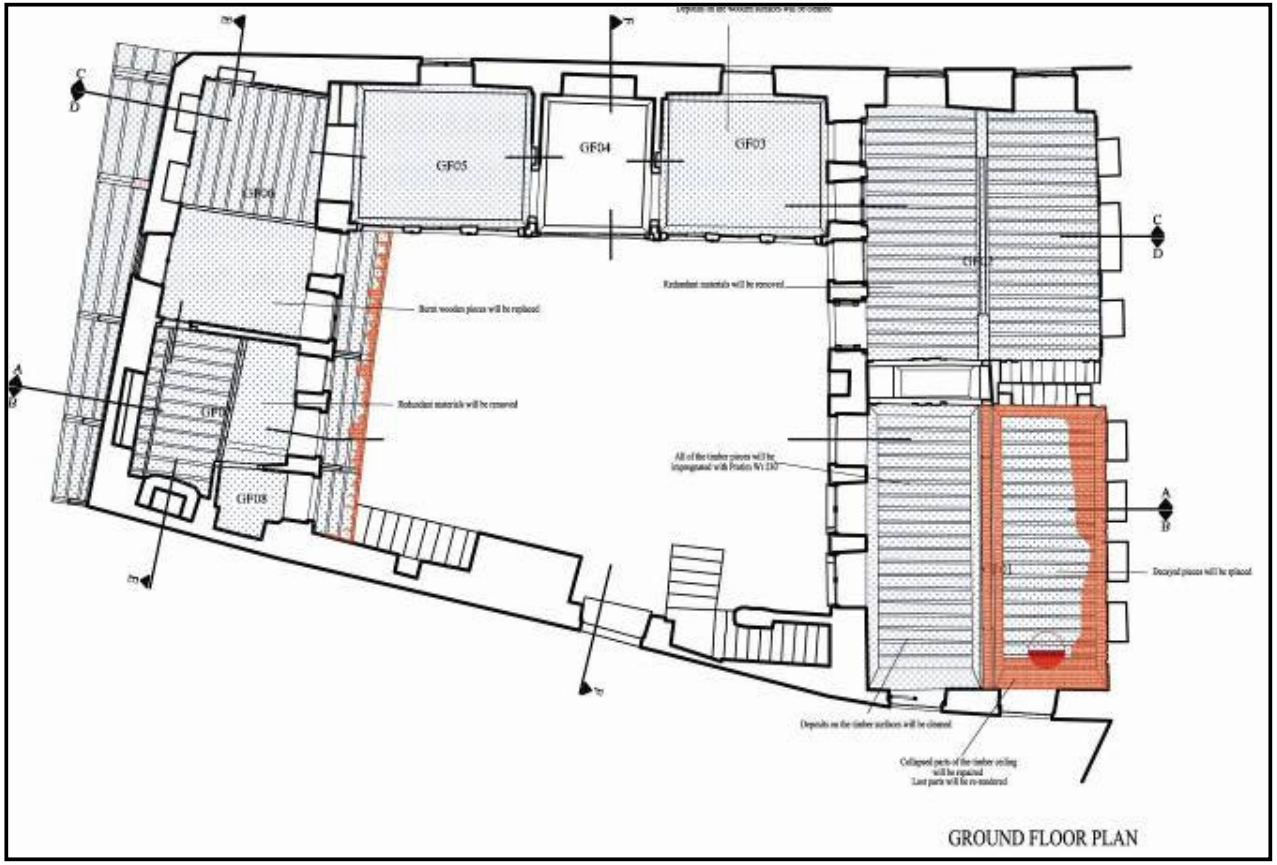

Illustration 77: Intervention Decisions – Reflected Ceiling Plan of Ground Floor

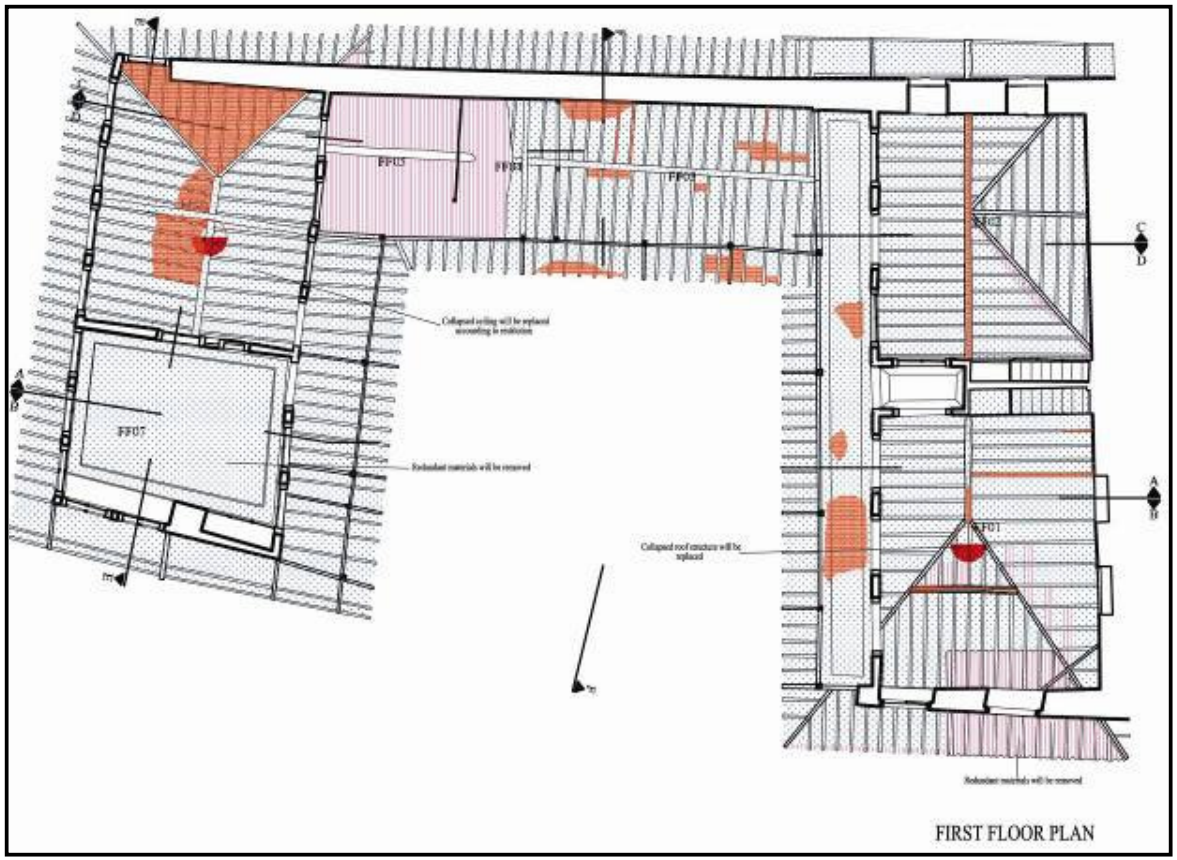

Illustration 78: Intervention Decisions – Reflected Ceiling Plan of First Floor Plan

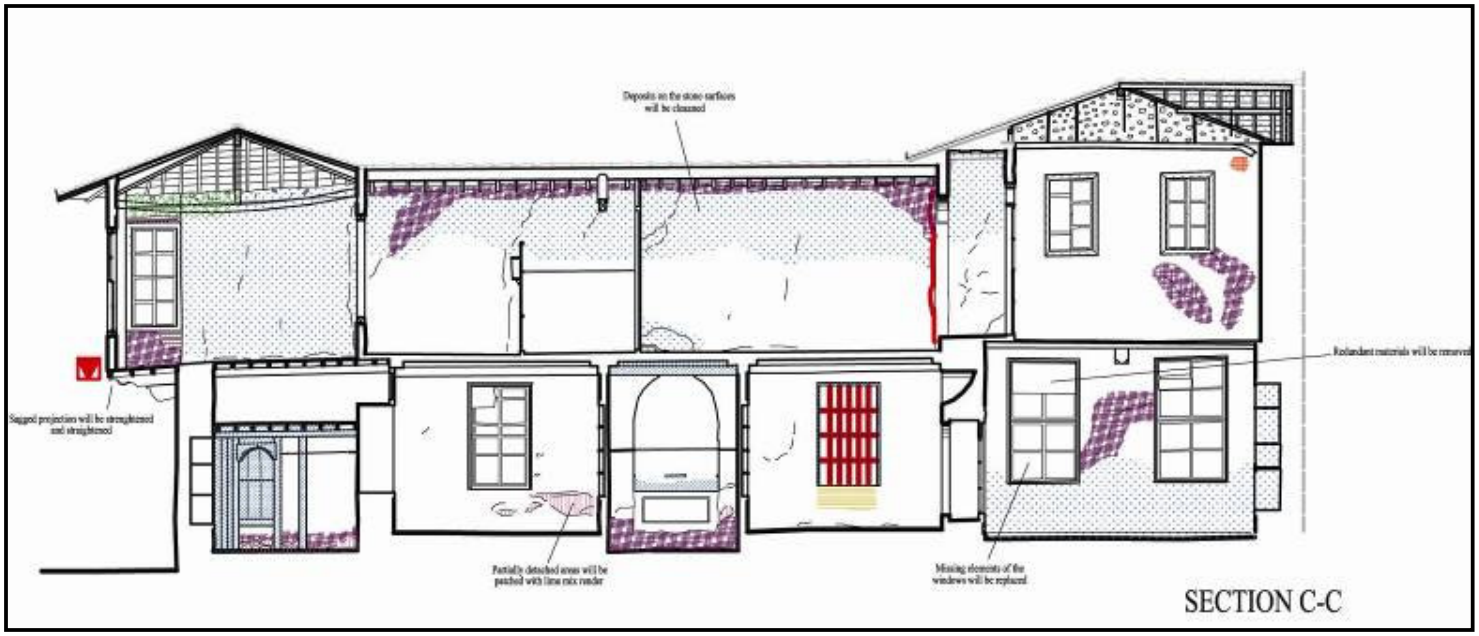

Illustration 79: Intervention Decisions – Section C-C

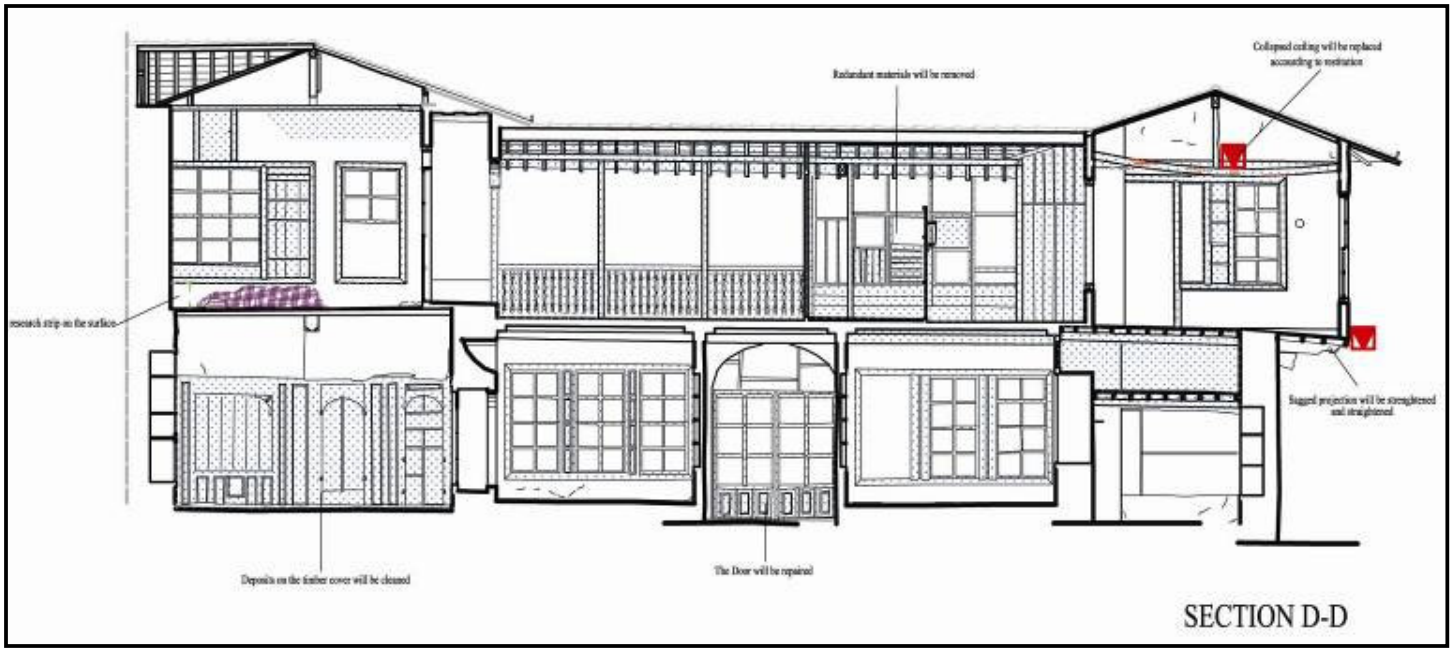

Illustration 80: Intervention Decisions – Section D-D

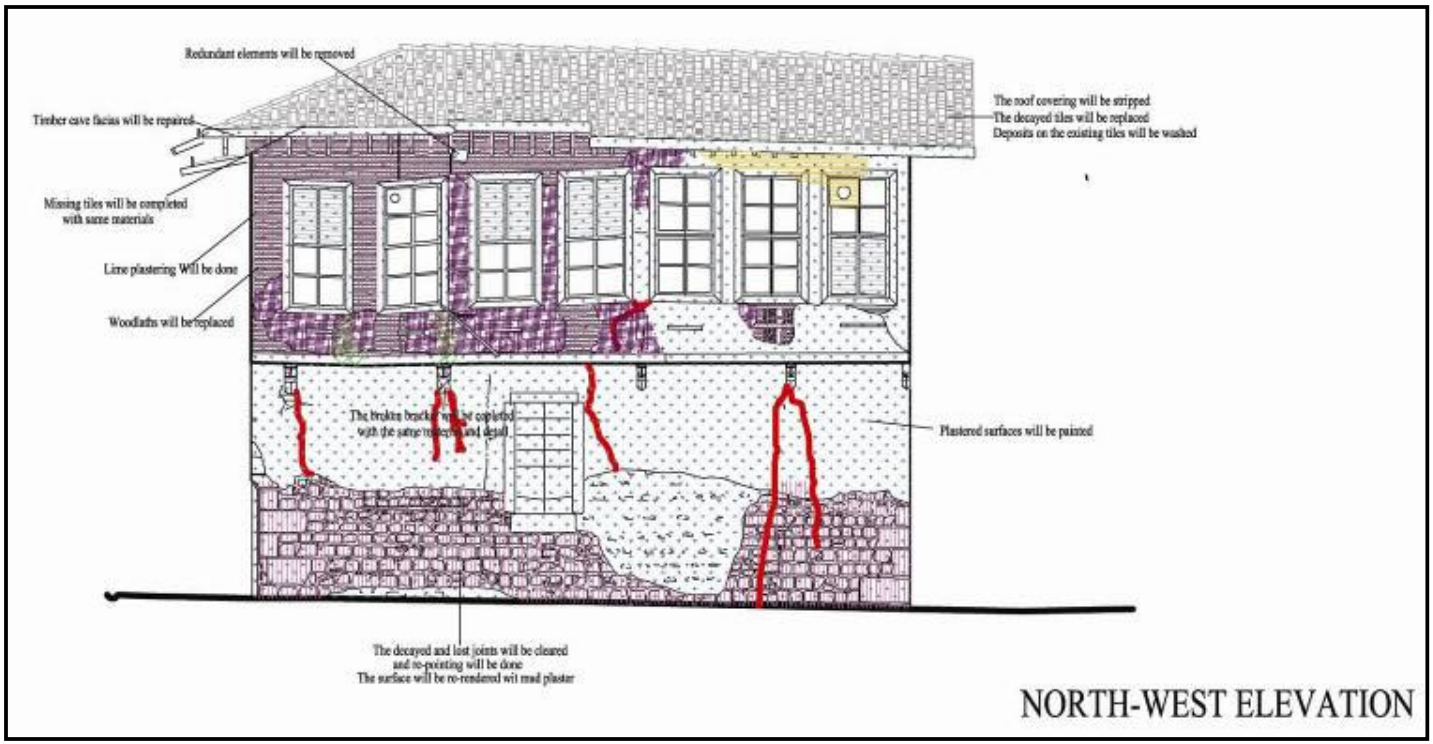

Illustration 81 : Intervention Decisions – North-West Elevation

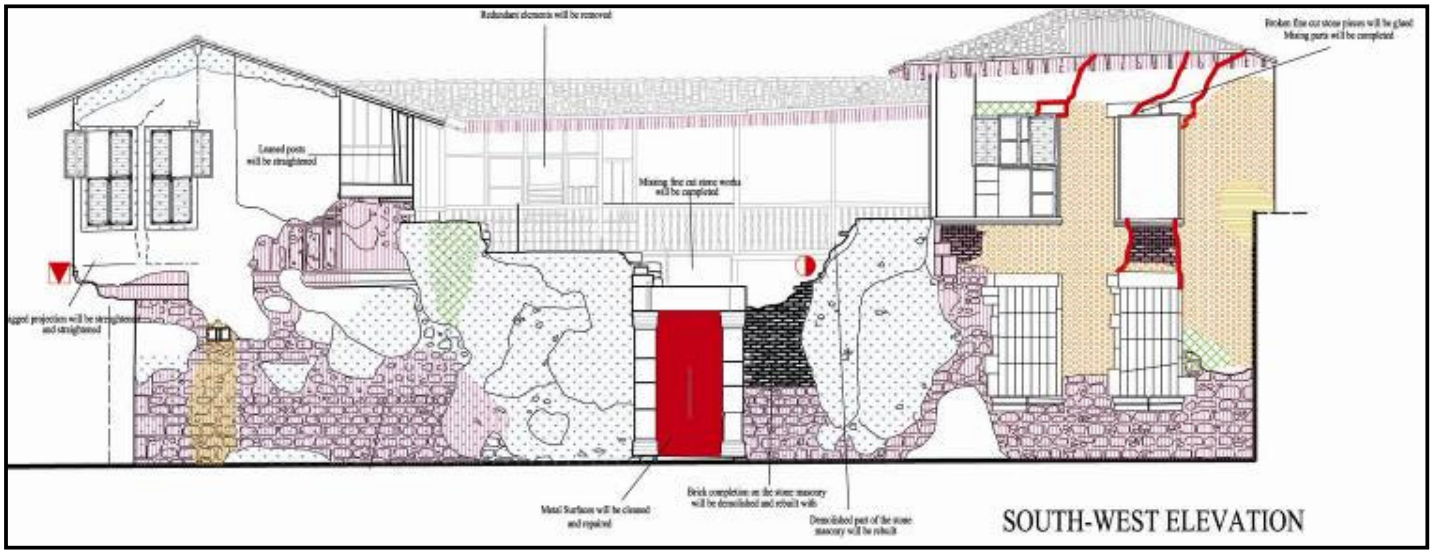

Illustration 82: Intervention Decisions – South-West Elevation