POLITECNICO DI MILANO

ARCHITECTURE FACULTY

MASTER OF SCIENCE IN ARCHITECTURE

A PROPOSAL FOR THE RESTORATION AND THE REUSE OF THE DISMISSED POWER PLANT OF EDİRNE, TURKEY

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Master of Science Thesis from:

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Academic year 2012/2013

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(M.Sc. Thesis)

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ABSTRACT

The subject of the thesis is the restoration of the Old Power Plant of Edirne, an interesting examples of an industrial architecture in Edirne and now considered part of the building heritage of Turkey. It was constructed by an Italian Company in 1929. The aim of the study consists in analysing the actual condition of the building, the possible restoration approaches, and finding a proper function in order to guarantee the building's presence for the future generations. To select the ideal function it was carried a thorough analysis on the surroundings of the Power Plant, such as the region, the city itself, Edirne, and the Zindanaltı-Tatarhaniler Cemetery found inside the Power Plant's gardens so that is considered a protected area. While evaluating results and taking the peculiarities of the region were taken into account, the proper function for the building is determined and as a result, a restoration project is proposed.

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2. THE ASSESSMENT OF EDİRNE CITY PHYSICAL, SOCIAL AND HISTORICAL FEATURES

2.1. Geographical and Physical Position

2.1.1. Location

Edirne is a province of Turkey. It is situated on the occidental side of Turkey's Marmara Region (northwest part of Turkey) the Thrace. It covers 6,276 square kilometres and the city of Edirne lies between 41°40'41'' North latitude and 26°33'34'' East longitude. Its borders are Bulgaria (88 km) to the north; Greece (204 km) to the west; Aegean Sea to the south; Tekirdağ and Kırklareli to the east; Çanakkale to the south-east. *(see Picture 2.1 and Picture 2.2)*

Picture 2.1

Picture 2.2

2.1.2. Topography and Environmental Position

The topography consists of plains and rolling hills. The average height is 41 meters above the sea level. Edirne is in up the Thrace Peninsula, with Istanca Mountains to the north; Koru Mountains and Aegean Sea of Saroz Gulf to the south; Meriç River and Meriç Plain to the west and Ergene Plain to the east. *(see Picture 2.3)* In the eastern part of the province 80% of the territory is suitable for agriculture. Edirne city is bounded on all sides except East by the Tunca River, a tributary of the Meriç River, which it joins on the south side of the city. *(see Picture 2.4)*

Picture 2.3

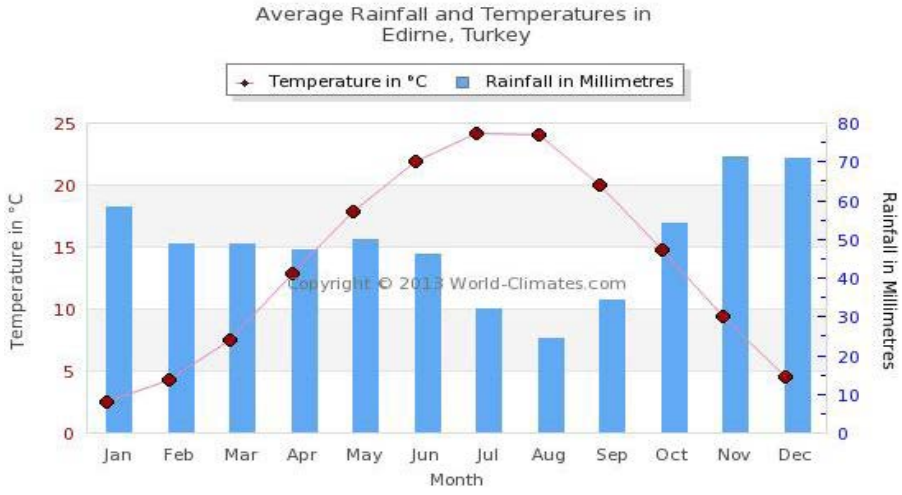
Picture 2.4

2.1.3. Climate

Edirne has a humid subtropical climate (Köppen climate classification: Cfa). with long, hot summers and cold and occasionally snowy winters. By the Turkish general climate zone classification standards, Edirne's climate is continental.

2.1.3.1. Temperatures Values

According to statistical data from the Meteorology Ministery of Edirne province, the annual average temperature is 14°C, the annual average maximum temperature is 19.5°C and the annual average minimum temperature is 8.2°C The annual total precipitation is around 600 mm. and the annual average humidity is 69.3% respectively. *(see Picture 2.4)*



Picture 2.5

2.1.3.2. Wind Condition

The average wind speed is 1.7 m / sec, and the prevailing wind is the north wind (yıldız). The northwest wind (karayel) and the southeast wind (keşişleme). One the strongest wind (kıble) is the south wind which blows at 28.9 meters per second.

2.1.4. Accessibility

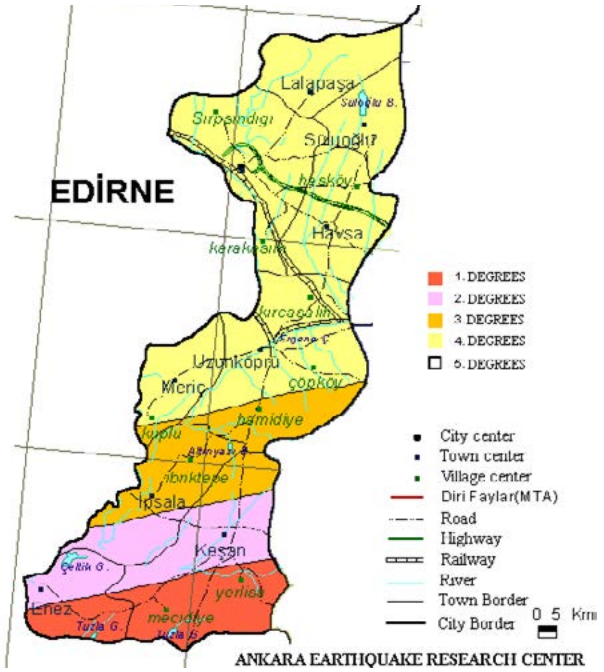
The city of Edirne lies on the modern highways and railways connecting İstanbul to Europe. There are four border gates: Kapıkule, Pazarkule, Uzunköprü and İpsala. Edirne city center is 7 km from Greece, 17 km from Bulgaria, 230 km from İstanbul, 700 km from Ankara, (the capital of Turkey). The ancient roads and routes connecting Europe and the Middle East, passing through İstanbul, played an important role in the development of the city of Edirne. *(see Picture 2.6)*

Picture 2.6

Highway: From Istanbul, Edirne can be reached by TEM highway and E5 (D100) international highway.
Railway: The railway which goes through in Edirne connects Anatolia to Balkans and Europe.
Airplane: There are no airports in Edirne.

2.1.5. Seismic and Landslide

Edirne city center lies on the fourth most dangerous earthquake zone of Turkey. Edirne was devastated by an earthquake in 1751. *(see Picture 2.7)*



Picture 2.7

In the last century, the only recorded earthquake was in 1953 (M=5.1 on the Richter scale).
Edirne has frequent floods. Frequent floods due to the joining of the Meriç and Tunca Rivers close to the city center. *(see Picture 2.8)*

Picture 2.8

2.2. Social-Cultural Structure

2.2.1. Population

According to the Turkish Statistical Institute, as of 31th December of 2011, the population of Edirne province was 399.316. In 2011, the annual population growth rate of Edirne province is 22.51‰ . 68.2% (per thousand) of the total population of Edirne lives in city and brough centers (272 294), while 31.8% lives in villages. (127. 022)

In 1927, the population of the city of Edirne was 35.000, in 1990 it was 102.345, in 2000 it was 119.298, in 2007 was 136.070, in 2008 was 138.054 and in 2009 it was 141.570.

2.2.2. Economical Condition

Edirne is one of the moderately developed provinces of Turkey. In 1996, according to the SPO (State Planning Organization) studying on the socio-economic development of Turkey's provinces, Edirne ranked 18th. In 2003, it was 16th.

The sectoral economic indicators show that the weight of agriculture in the economy is significant. As of 2001, in the GDP the distribution of the economic sectors was; services 56.4%, agriculture

27.9%, industry 12.1%, construction 3.6%.

In Edirne, agricultural production is mainly field crops. The large and fertile lands have been mostly planted with wheat, sunflower and rice. In addition, sweet corn, broom grass and watermelon production is also important.

As of 2008, in Edirne, the total 370.015 hectares of cultivated land was divided in: wheat (47% of the total), 31% sunflower and rice production 11%. The share of these products of the total cultivated area was 90%. In Edirne, the weight of the agricultural economy, is due to the large and fertile soil.
Data from the TSI (Turkey Statistical Institute), in the years between 2003-2007, Edirne's share of Turkey's total rice production was 44%, the sunflower production was 20% and wheat production was 3%.

2.2.3. Touristical Facilities

Edirne is located on the route which connects Europe to Anatolia: a great opportunity for tourism. Edirne has important history and architecture, it is visited by domestic and foreign tourists every year. Particularly, the number of tourists from Greece and Bulgaria is quite high. Edirne's Selimiye Mosque was built by Mimar Sinan. It is listed on the UNESCO world heritage list and is visited by many tourists every year. Edirne has many picnic areas. For instance, Sarayiçi and Söğütlük which are on the Edirne-Karaağaç road along the Meriç river.

2.2.3.1. Festivals

The Kırkpınar Grease (olive oil) Wrestling Festival are held each year (June or July) in the green grassy area of Sarayiçi. The traditional old sport dates back to 1361. It includes various folk dances, fairs, contests and regional cooking contests. The last three days of festival are dedicated to the actual Grease Wrestling Competitions.

Kakava Festival is a celebration of Romani people held on May 5 each year.
Edirne Band and Ciğer Festival are held on June.

2.2.4. The Towns and Villages of the Province of Edirne

Edirne Province has 9 towns and 248 villages. *(see Picture 2.9)*

Towns;
1) Enez,
2)Havsa,
3)İpsala,
4)Keşan,
5)Lalapaşa,
6)Meriç,
7)Süloğlu,
8)Uzunköprü
9)Edirne

Picture 2.9

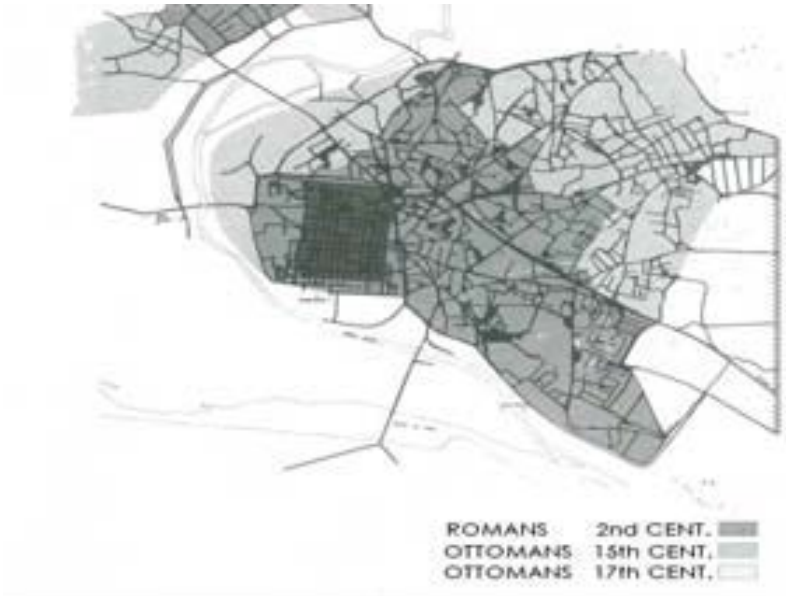
2.2.5. Social Condition

The working population of Edirne concentrates on the agricultural sector and the services sector. According to the census of 2000, 402.000 people and 206.708 people comprising 51% of the population were economically active. 97.404 employees (50%) were in the agricultural sector, 74.895 (38%) were in the services sector, 17.688 (9%) were in the industrial sector, 5925 ‘s as well (3%) were operating in construction.

2.3. History of the City of Edirne

The ancient city was probably first founded by Thracian tribes. At the beginning of the second century A.D. the Roman emperor Hadrianus rebuilt and enlarged the city, naming it after himself. The Edirne soon grew into a military stronghold and commercial center of the Roman Empire, making it a desirable target for invaders. Goths attacked and captured the city in 378, Avars in 586, and Bulgars in 914. Edirne was plundered twice by the crusaders and fell to the Ottomans in 1361.

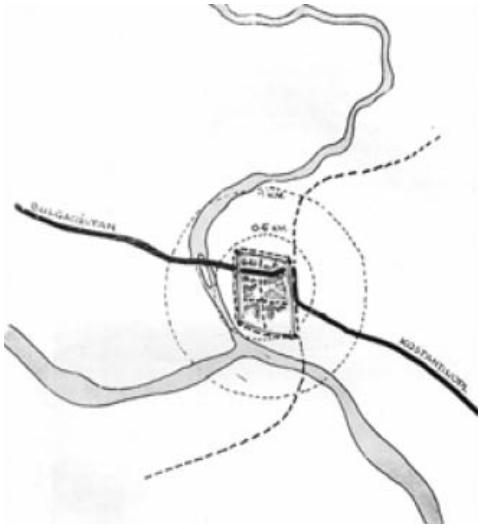
The Ottoman conquest of Edirne marks a turning point in Ottoman history, as the city served as the key staging area for further Ottoman expansion in Europe. Shortly after the conquest, Sultan Murat I (r. 1362-89) renamed the city Edirne in the fetihname (declaration of conquest) and constructed its first Ottoman Palace. Edirne was the capital of the empire between 1365 and 1453. The Ottoman advance through the Balkans after the conquest of Edirne led to the formation of a crusader army to stop the Ottomans. The Ottomans defeated the crusaders in the Meriç River valley in the 1371, during the Battle of Çimen. After that the Ottomans solidified their hold over the region. *(see map 2.1, map 2.2 ,map 2.3, map 2.4 and Picture 2.10)*



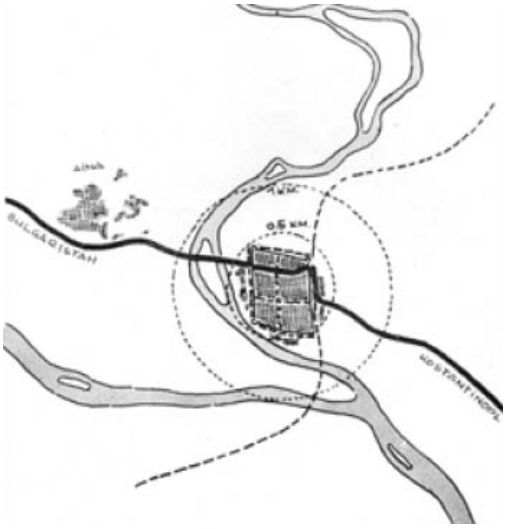
Map 2.1

Edirne enjoyed a further period of growth during the reign of Sultan Murad II (r. 1421-1444: 1446-51), who was responsible for constructing the Muradiye Mosque in 1436, considered the most successful example of 15th century Ottoman decorative art. Edirne’s Üç Şerefeli Mosque, built by in 1447, marks the transition between early and classical Ottoman Architecture. Murad also began construction of the new Edirne Palace in 1450. Mehmet II became the Ottoman sultan in 1451. The city served as his base of operations as he prepared for the 1453 conquest of Constantinople, also knownas İstanbul. Following its conquest, Constantinople became the Ottoman capital, but Edirne continued to occupy a significant place in imperial strategy and cultural history. During the 16th century, the

Ottoman advanced westward was directed from Edirne. The sultans spent much of their time in the palace there, effectively making Edirne the seat of government for much of the century. The sixteenth century was indeed the most glorious period in Edirne's history. Sultans Beyazid II (r. 1481-1521) and Selim II (r. 1566-74) built great mosques, building complexes (külliye) and public buildings in the city. *(see map 2.5, map 2.6, map 2.7)*



Map 2.2 II. Century



Map 2.3 XIV. Century

Map 2.4 XV. Century

Map 2.5 XVII. Century

Map 2.6 XIX. Century

Map 2.7 1950s

(Kıran,2006)

Picture 2.10 XI. Century

In the 17th century Edirne regained its importance when Sultan Ahmet I (r. 1603-17) chose the city as his place of residence. As the century progressed, sultans Osman II (r. 1618-22), Murat IV (r. 1623-40) and Mehmet IV (r. 1648-87) organized magnificent hunting parties in the forests around the city, which was considered almost a second capital (after İstanbul); Mehmet IV also mounted military campaigns against Venice and Poland from Edirne. Other sultans who preferred to live in Edirne included Süleyman II (r. 1687-91), Ahmed II (r. 1691-95) and Mustafa II (r. 1695-1703); Mustafa was deposed in 1703 after an uprising, known as the Edirne Incident.

Edirne was devastated by a great fire in 1745 and by an earthquake in 1751. The city was also stricken by political turmoil; Ottoman notables in Edirne rebelled twice against Selim III (r. 1789-1807) in 1801 and 1806. In 1829, for the first time in its history as an Ottoman city, Edirne was invaded by a foreign power when Russia took the city after a three-day siege; through the mediation of the Prussian ambassador, a treaty was signed and the Russians withdrew. This withdrawal, however, did not prevent a mass exodus of Muslims from the city. Following this episodes, Sultan Mahmud II (r. 1808-39) visited the city in 1831, hoping to revive its former glory.

A second invasion of Edirne by Russian forces during the Russo-Ottoman War of 1877-78 resulted in many casualties among the population and great destruction of the city's infrastructure and architecture. In 1913, during the first Balkan War (1912-13) Bulgarian armies occupied Edirne for four months. Toward the end of Ottoman period, at the close of World War I. The city was invaded by Greece (1920-22). The Turkish army reentered Edirne in 1922 after Mudanya Armistice. Finally, with the Treaty of Lausanne in 1923, Edirne became a frontier city on the Turkish border with Greece and Bulgaria.

2.3.1. Historical Architecture and Cultural Heritage

The city of Edirne was the Ottoman capital for many years. In the 18th century, it was one of the seventh largest cities in Europe. It has been the capital of the Ottoman Empire for 100 years, so it has significant historical architecture. Edirne is thus a living museum; with its mosques, religious complexes, bridges, old bazaars, caravansary and palaces.

Edirne is the third city in Turkey in terms of richness of historical monuments after Istanbul and Bursa. Despite two big fires, earthquakes, and the four invasions that caused a lot of damage, it continues to be a museum city. The important historical monuments are the following:

2.3.1.1. Mosques

Old Mosque (1403)

The construction of the Old Mosque was started by Emir Süleyman in 1403 an completed during the reign of Çelebi Sultan Mehmet in 1414. It belongs to the category of multiple dome 'Grand Mosques'. The marble gate and decorative inscriptions inside are remarkable.

Muradiye Mosque (1426)

The Muradiye Mosque was built by Murad II in 1435 (839 A.H.) on a hill northeast of the city that overlooks the palace grounds (Sarayiçi) to the northwest. Originally conceived of as a convent (tekke) for the Mevlevi order, the building was converted into a mosque when completed. A separate convent, soup kitchen (imaret) and school (mekteb) were built on the site; none of them survive today. The mosque remains in a heavily repaired condition following damage in major earthquakes.

Üç Şerefeli Mosque (1437)

The imperial mosque known as Üç Şerefeli Cami is a short distance to the north-west of Eski Cami in the town centre. The mosque takes its name from the fact that the tallest of its four minarets has three (üç) balconies (şerefe). The mosque was built in the years 1437-47 by Murat II, and it is the largest edifice erected in the Ottoman Empire prior to the conquest of Constantinople. All fours minarets are decorated with different stone patterns up to the first şerefe. *(see Picture 2.11)*

Picture 2.11

Beyazid II Complex (1484)

The Beyazid II Complex belongs to the külliye type comprising a large collection of buildings of which the mosque is central. Located on the north shore of the Tunca River, it occupies an area of 22,000 sqm and is surrounded by walls.

Picture 2.12

In addition to the mosque, two guest-houses adjoining the mosque, ther are a hospital, a medical school, a soup-kitchen, food-storage areas, and a double bathhouse (*hamam*). It was built by order of Beyazid II between and 1484-1488, by the architect Hayrettin. It has a striking appearance with almost 100 small and large domes. The asylum and medical school are on the west of the mosque. The insane were treated in domed cells around the courdyard. The main instrument of healing was the sound of music and water. Today, the Health Museum is located here. *(see Picture 2.12)*

Selimiye Mosque (1568)

The mosque, which was built on a hill top overlooking the city by **Architect Sinan*** by the order of Selim II between 1568 and 1575, is a masterpiece of classical architecture. The full structure is built as a kulliye with the mosque in the center of the courtyard and a madrasa on the southern side of the courtyard. Today, the Turkish İslamic Art Museum is located in the madrasa. A Bazaar was built in the west corner of the coutyard by Architect Davut Ağa in resquest of Murat III in order to bring revenue to the mosque. Today, there are mostly shops selling souvenirs in the bazaar among the 124 aligned shops. Selimiye Mosque is the symbol of Edirne, and is accepted as a 'Master Work' by Sinan's own words. It is one of the most beautiful works of the Ottoman period.*(see Picture 2.13)*

Picture 2.13

2.3.1.2. Bazaar & Caravansary

Rüstempaşa Caravansary (1561)

This classical Ottoman architecture was built in 1561 by the **Architect Sinan*** by order of Rüstem Paşa, who was the Grand Vizier of Kanuni Sultan Süleyman. It follows the typical plan of caravansaries with courtyard. It is a two-story building, surounding a courtyard. The inside facade is a portico with arches. Behind the arches there are rooms with fireplace and niches. It was restored in 1972 and converted into a hotel. It received the Ağa Khan Architectural Award in 1980 for the restoration work. *(see Picture 2.14)*

Picture 2.14

* '*Mimar Koca Sinan (1489–1588), the most celebrated of all Ottoman Empire architects, is particularly renowned for his contributions to the cityscape of Istanbul. During his fifty-year career he designed hundreds of buildings (including the greatest of Turkish mosques, the Suleymaniye and the Selimiye) and his distinctive architectural idiom left its imprint on the terrain of a vast empire extending from the Danube to the Tigris.' The Age of Sinan: Architectural Culture in the Ottoman Empire, Gülru Necipoglu, Reaktion Books, Limited, 2005.*

Deveci Inn (Old Prison) (1561)

The Deveci Inn is one of the early examples of Ottoman Inn. There are 31 rooms. It is estimated to have been built in 1561. The building was restored and turned into a prison under Governor General Rüstem around (1846). It was used as a prison until 1949.

Supreme Court (1561)

The Supreme Court has been constructed by **Architect Sinan** in 1561 by order of Kanuni Sultan Süleyman. It has a marble foundation and pool on the top floor. The building was used by both the Cabinet and Supreme Court. *(see Picture 2.15)*

Picture 2.15

Ali Paşa Covered Bazaar

It was built by **Architect Sinan** in 1569 by order of Semiz Ali Paşa, another Grand Vizier of Kanuni Sultan Süleyman. It has 6 gates and 130 shops. It experienced its most glorious period in the 17th century.

2.3.1.3. Turkish Bath (Hamam)

Tahtakale Hamam (1434)

This bath was built in 1434 by Sultan Murat II to provide income fort he Darü'l Hadis Mosque and Theological School.

Mezitbey Hamam (1442)

It is the west of Selimiye Mosque and east of the Old Mosque. It was build by Mezitbey who died in the cause of Islam in Eflak in 1442.

Sokullu Turkish Bath (16th century)

It is cross the street from the Üç Şerefeli Mosque. It has been constructed by **Architect Sinan** in the 16th century by order of Sokullu Mehmet Paşa. The entrance supports a double-height, triple-vaulted portico with once-ornate columns. *(see Picture 2.16)*

Picture 2.16

2.3.1.4. Churches and Synagogues

Sweti George (Bulgarian) Church (1880)

It was built in 1880 in Kıyık. It has writings in Bulgarian and paintings remained from other churches. It was restored by the Governorship.

Constantin and Elena Church (1869)

This Church has been built in 1869. Constantine and Elena was restored and opened to visit in 2008.

Grande Synagogue (1905)

The Great Synagogue was built by Ottoman Sultan Abdul Hamid II following a large fire, called the "Harik-i Kebir" (big fire), which destroyed 13 synagogues in the city. The construction of the synagogue started in 1905 and it was opened for worship in 1907. The synagogue was in use until 1983 and could accommodate 1,200 worshipers, 900 men and 300 women. *(see Picture 2.17)*

Picture 2.17

2.3.1.5. Bridges

Gazi Mihal (Hamidiye) Bridge (1402)

This bridge is westward of Edirne on the road to Bulgaria over the Tunca River. It was built during the Byzantine period by Mikhael Palaiologos. In 1402, during the Ottoman period, Gazi Mihal Bey extensively repaired and practically rebuilt the bridge. The lancet arch historical booth was added in 1640. *(see Picture 2.18)*

Picture 2.18

Uzun (Long) Bridge (1426)

This bridge across the Ergene River was built by architect Müslihidin by order of Murat II in 1426-1443. It is 1.392 m long and 6.80 m wide with 174 arches. Some of the stone bases are round and some are pointed. *(see Picture 2.19)*

Picture 2.19

Saraçhane (Şehabettin Pasha) Bridge (1451)

This bridge crosses the Tunca River near Sarayiçi northwest of Edirne. It was built of stone in 1451 during the reign of Murat II by an important statesmen, Şehabettin. *(see Picture 2.20)*

Picture 2.20

Fatih Bridge (1452)

This bridge located between Demirkapı and the Supreme Court in Sarayiçi across the Tunca River. Although its constructions date is not known, it is thought to have been built during the reign of Fatih in 1452.*(see Picture 2.21)*

Picture 2.21

Beyazıd Bridge (1488)

The Bridge, over the Tunca River, is near the Bayezid Complex. It is thought to have been built in 1488 by architect Hayrettin by order of Sultan Beyazid II. *(see Picture 2.22)*

Picture 2.22

Saray Bridge (Kanuni Bridge) (1560)

Across the Tunca River, it connects Edirne and Sarayiçi. It is thought to have been built by Mimar **Sinan** in 1560 by order of Kanuni Sultan Süleyman. It includes justice (toll) booth. It is 60 m long with four arches and is made of dressed stone. *(see Picture 2.23)*

Picture 2.23

Yanlızgöz Bridge (1570)

This is an addition to the Bayezid Bridge which connects to İmaret neighborhood. It was built during the reign of Selim II in 1570 by the architect **Sinan.** *(see Picture 2.24)*

Picture 2.24

Ekmekçizoğlu Ahmet Paşa (Tunca) Bridge (1608)

This bridge crosses the Tunca River. It was built in 1608-1615 by order of Ekmekçizade Ahmet Paşa. The architect was Sedefkâr Mehmet Ağa. The memorial booth that used to be in the middle, was destroyed by flood waters in recent years and was replaced by one made of reinforced concrete. This bridge is infront of the Power Plant. *(see Picture 2.25)*

Picture 2.25

Meriç (Mecidiye) Bridge (1842)

This stone bridge is on the Edirne- Karaağaç road across the Meriç River. Sultan Abdilmecit ordered to build it in 1842. It is 263 m long and 7 m wide. There is a marble memorial booth at the middleof the bridge. *(see Picture 2.26)*

Picture 2.26

3. THE ASSESSMENT OF EDİRNE POWER PLANT LOCATION AND ITS SURROUNDING DISTRICT LOCATION, HISTORICAL BACKGROUND AND SPIRAL ENVIRONMENT

3.1. The Location of Edirne Power Plant and its History.

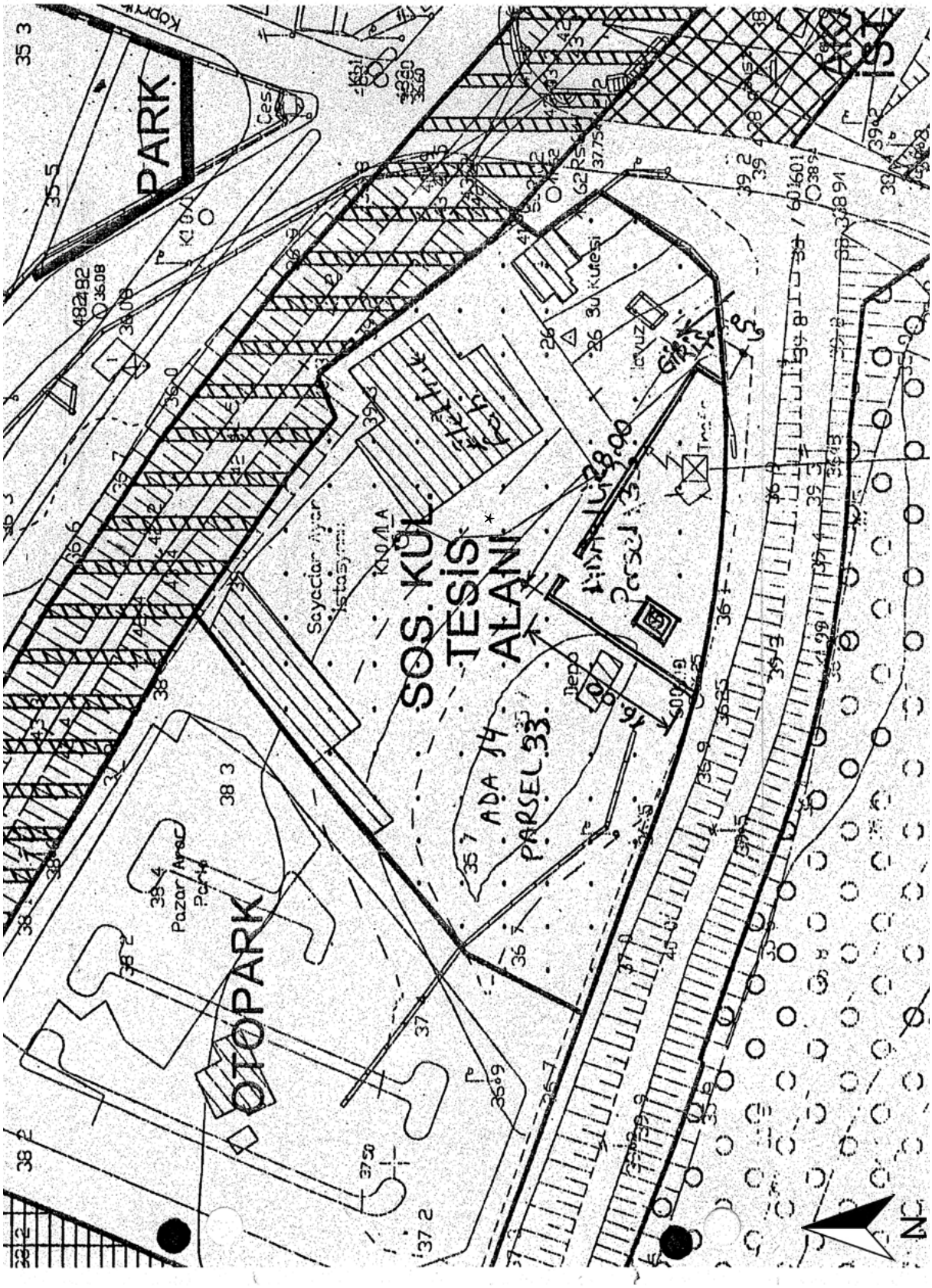
3.1.1. The Location of Edirne Power Plant

The Power Plant is in the center of Edirne City. It is located in Türkoğlu District, Sakalar iskelesi Street, Kaleiçi localization. It is registered as 1 section, 14 islands, numbered as 38th lot. It belongs to the Edirne Mulicipality. The total lot size is 5.640.000 m^2 and has been classified as a social cultural facility. The building itself is 570 m^2 located at the corner of Lozan Street and Old Tekirdağ Street. *(see Picture 3.1.1)* There is a railway at the north of the urban lot, the Tunca River flows on the south, Ulus Bazaar is on the west and Lozan Street is the east end of the lot. *(see Picture 3.1.2)*

The Edirne Electrical Building is surrounded by a garden which is enclosed by walls along the property limits.

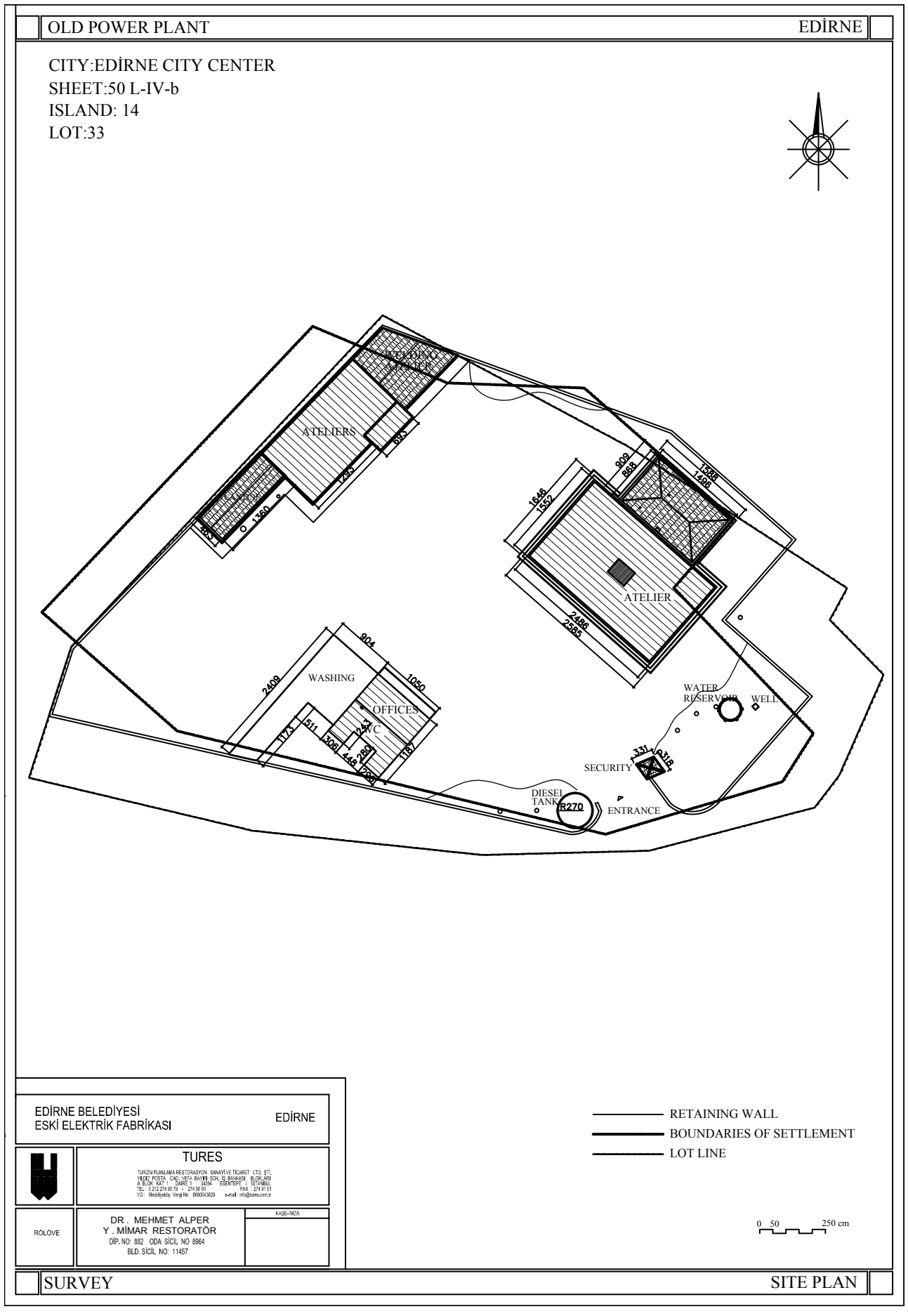
The old site plans in of the Power Plant lot, show that there were single-storey buildings to the northwest and southeast: the entrance guard building, the fuel tank and storage. This single-storey buildings were demolished in 2007. *(see Picture 3.1.3)*

Picture 3.1

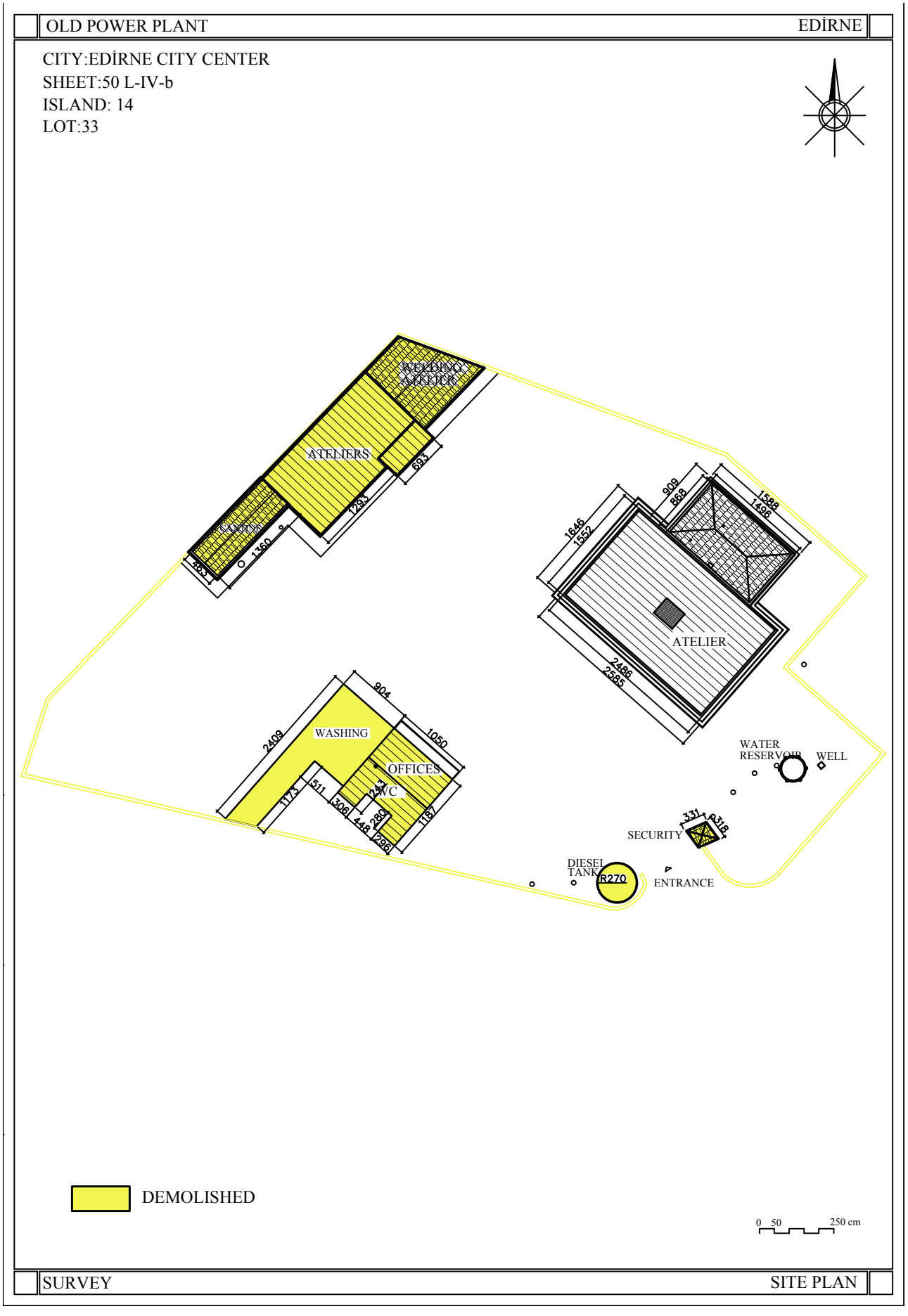


Drawing 3.1.1 (Drawing from Edirne Municipality in 2012)

* Area of Socal and Cultural Facilities



Drawing 3.1.2 (Drawing from Tures Architecture, 2002)


OLD POWER PLANT
EDİRNE
CITY:EDİRNE CITY CENTER
SHEET:50 L-IV-b
ISLAND: 14
LOT:33
WELDING ATELIER
ATELIERS
693
1293
CANTEEN
1360
485
909
868
1588
1496
1646
1552
ATELIER
2486
2585
904
2409
WASHING
1050
OFFICES
WC
1173
511
306
243
260
448
296
1187
WATER RESERVOIR
WELL
331
318
SECURITY
DIESEL TANK
R270
ENTRANCE
DEMOLISHED
0 50 250 cm
SURVEY
SITE PLAN

Drawing 3.1.3

3.1.2. History of The Edirne Power Plant

1928-29 : Construction starts
1931 : Inauguration
1965 : New alternators were added
1982 : Production stopped
1987-1996 : Used as a 'Machine Supply Atelier'
1996-present: Abandoned

Edirne Power Plant was constructed in the years 1928-1929 by the **Italian Marelli Company**[1] and in 1931, the generator building was inaugurated.

The Italian Marelli Company had established other Power Plants in Turkey, in Balikesir, Bursa, Gaziantep, Kastamonu and Tekirdağ.

When Edirne Power Plant was first installed Italians mounted four units alternators. Six transformers distributed the energy to the city. In 1937, the electricity grid network was taken over by the Municipality of Edirne. To face the increasing demands of electricity, the municipality added new alternators and the plant continuously delivered electricity to Edirne until 1965.

The distribution of electricity in Edirne was carried out by the municipality until the 1st of November 1982 by Law No. 2705. On this date, The Power Plants with all the electricity distribution network have been turned over to the Turkey Electricity Authority. Today, the distribution of electricity, in Thrace is run by TREDAŞ (Trakya Electricity Distribution Company).[2]

Edirne Power Plant has been used as a 'Machine Supply Atelier' from 1987 to 1996 by Edirne Municipality to repair and maintain Edirne Municipality's vehicles. At the moment, it is an abandoned building.

Edirne Municipality wants to turn it into a cultural center but the Turkey Council of Monuments did not permit to design the Cultural Center because of the Tatarhaniler Cemetery in the garden of Edirne Power Plant. The Edirne Council of Monuments sued Edirne Municipality. The case is still unresolved. (Şamiloğlu, 2012)

In April 2013, The Edirne Council of Monuments has constructed a new garden door, the garden has been cleaned and the trees that were near the Power Plant were cut.

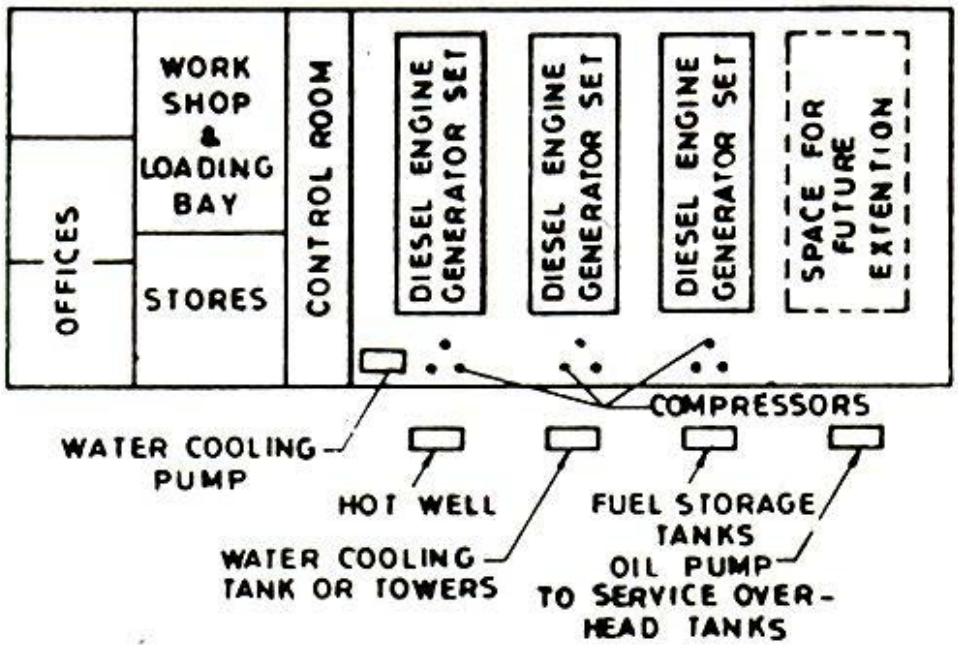
3.1.3. Diesel Electric Power Plant Layout

The general layout of a medium size diesel-electric, power plant .The units are usually placed parallel to each other in order to keep the length of electrical connections for generators to control board and air ducts and exhaust pipes minimum. The generating units (diesel engine – generator sets) are placed on large concrete slabs preferably reinforced. The air intake and filters and the exhaust mufflers should not be located in the engine room.

---

[1] *In 1891, Ercole Marelli founded the company bearing his name, specialised in the production of electrical devices and engines. Magneti Marelli was founded on the 8th October 1919. Fabbrica Italiana Magneti Marelli; the first plant was established in Sesto San Giovanni near Milan, Italy.*

[2] *Tredaş Sinerji Magazine, 2004*



Picture 3.2

3.1.3.1. General Function of Diesel Power Plants

The major components of the plant are:

Engine

Engine is the heart of a diesel power plant. Engine is directly connected through a gear box to the generator.

Air supply system

Air inlet is arranged outside the engine room. Air from the atmosphere is filtered by air filter and conveyed to the inlet manifold of engine.

Exhaust System

This includes the silencers and connecting ducts. The heat content of the exhaust gas is utilized in a turbine in a turbocharger to compress the air input to the engine.

Fuel System

Fuel is stored in a tank from where it flows to the fuel pump through a filter. Fuel is injected to the engine as per the load requirement.

Cooling system

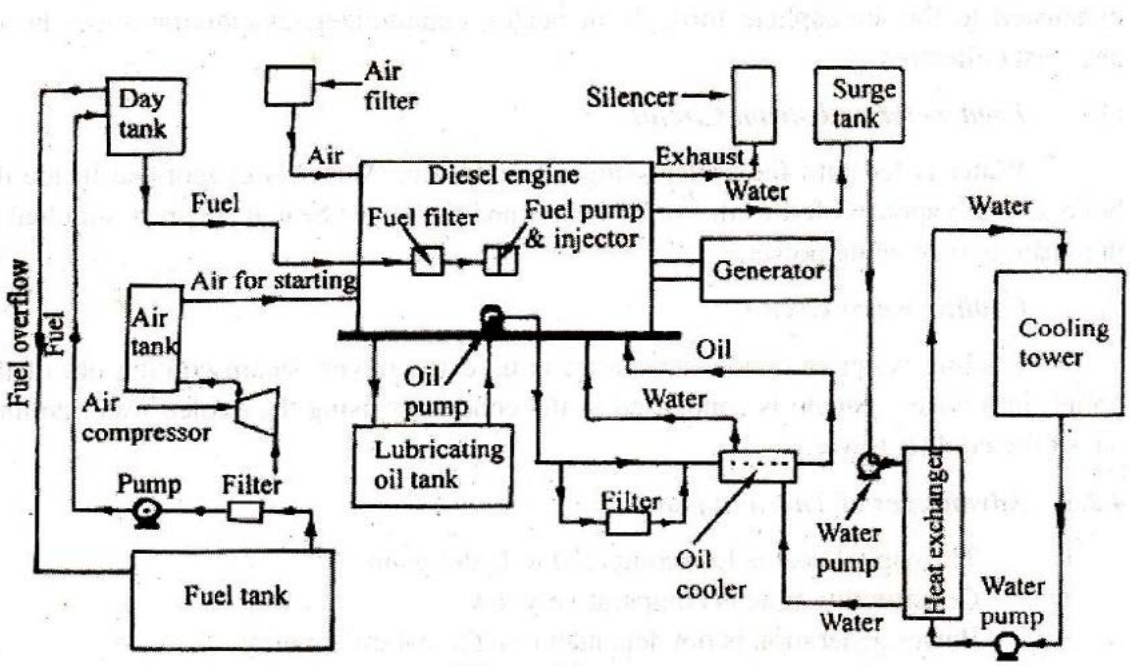
This system includes water circulating pumps, cooling towers, water filter etc. Cooling water is circulated through the engine block to keep the temperature of the engine in the safe range.

Lubricating system

Lubrication system includes the air pumps, oil tanks, filters, coolers and pipe lines. Lubricant is given to reduce friction of moving parts and reduce the wear and tear of the engine parts.

Governing system

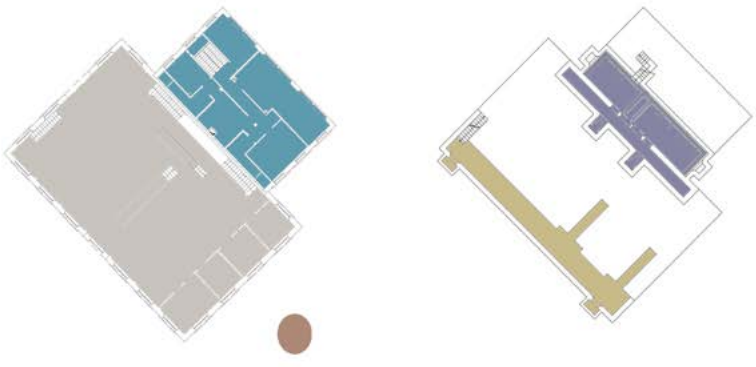
The function of a governing system is to maintain the speed of the engine constant irrespective of load on the plant. This is done by varying fuel supply to the engine according to load.



Picture 3.3

3.1.3.2. Layout of Edirne Power Plant

GROUND FLOOR PLAN

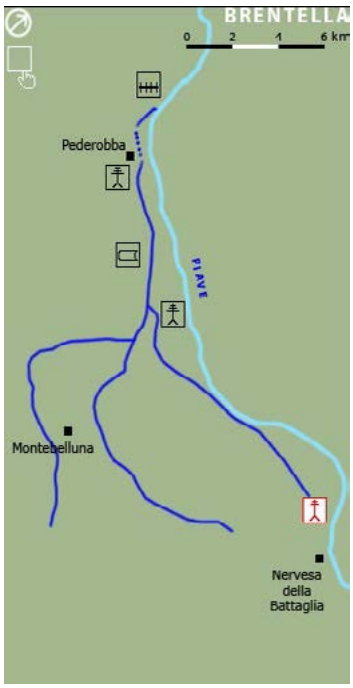


FIRST FLOOR PLAN

BASEMENTFLOOR PLAN

3.1.4. Similar Layout of Edirne Power Plant

3.1.4.1. Centrale di Castelviero

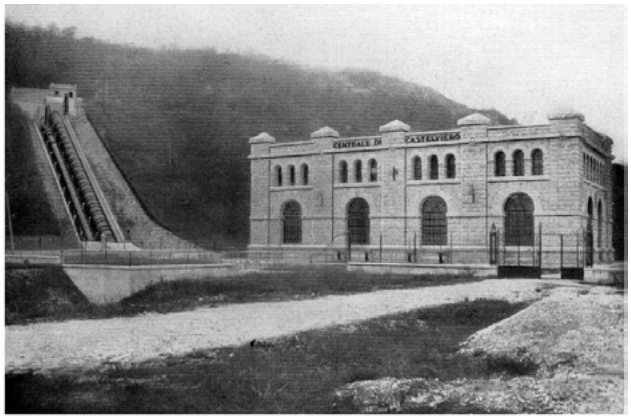


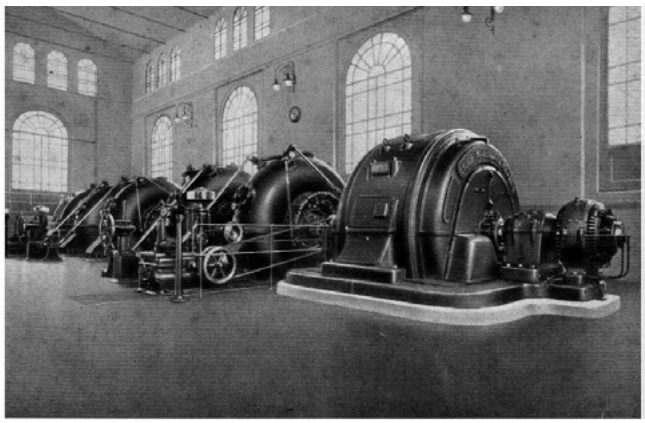
Picture 3.4

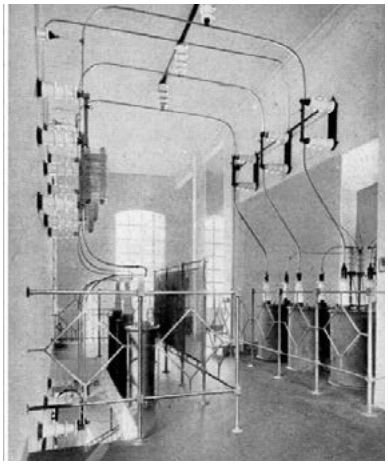
LOCATION: Castelviero hydroelectric plant is located in Nervesa della Battaglia, Treviso, Italia. The Castelviero hydroelectric plant is a flowing water plant using the waters of the Piave midway between Vader and Nervesa. *(see picture 3.4)*

Electricity production started in 1930. The building of Hydraulic and electromechanical design were made by **Ercole Marelli di Milano**. However, the project design is unknown. The building is in concrete and the facade is covered with stone. The plan of the building is rectangular. The floors are in concrete. The ashlar stone cladding is accentuated by a differentiation at the base. The style of the building is Romanesque. Castelviero hydroelectric plant is still in use. *(see Picture 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11 and 3.12)*

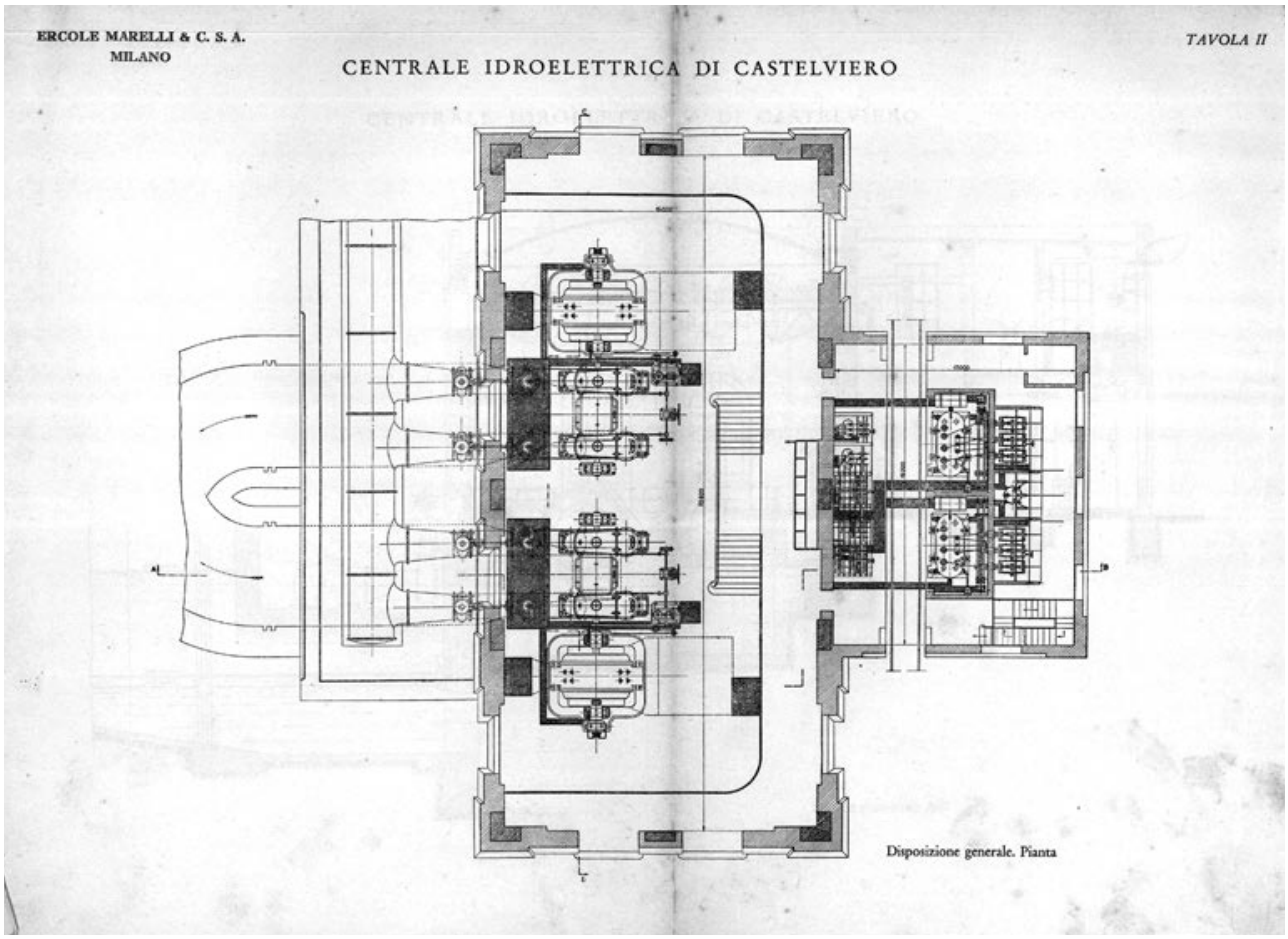
The Castelviero hydroelectric plant has a yearly energy of about 35 million kilowatt hours, it is able to meet the annual average needs of about 14,000 families (estimating an average consumption of 2,500 kWh per year) Castelviero hydroelectric plant has a similar plan than one of Edirne Power Plant. They were also constructed by Italian Ercole Marelli Company in the same year. Castelviero hydroelectric plants' arched window frame and the lamps are similar to those of Edirne Power Plant. (see drawing 3.1.4, 3.1.5 and 3.1.6)


Picture 3.5


Picture 3.6


Picture 3.7

Picture 3.8



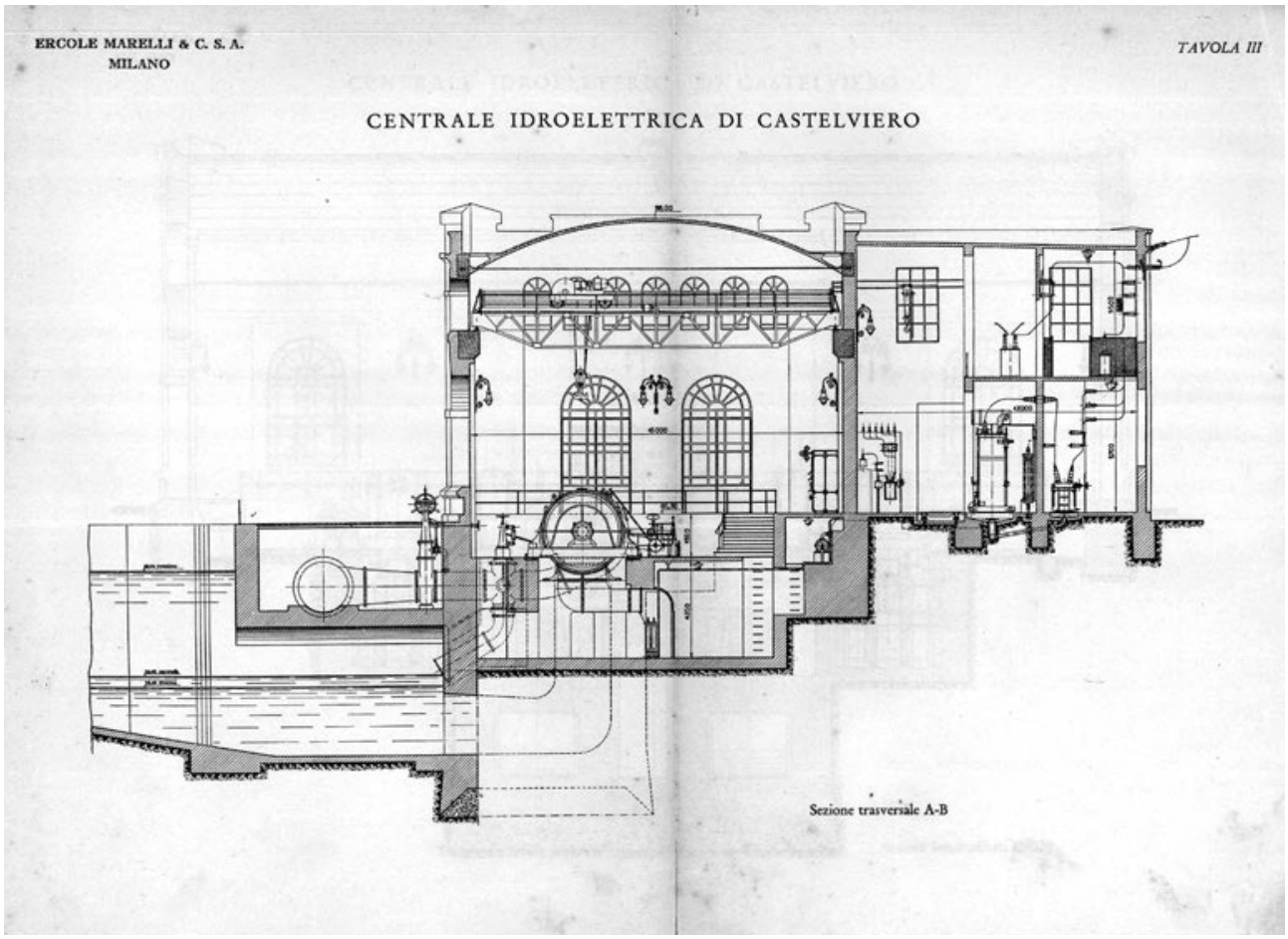
Drawing 3.1.4

Picture 3.9

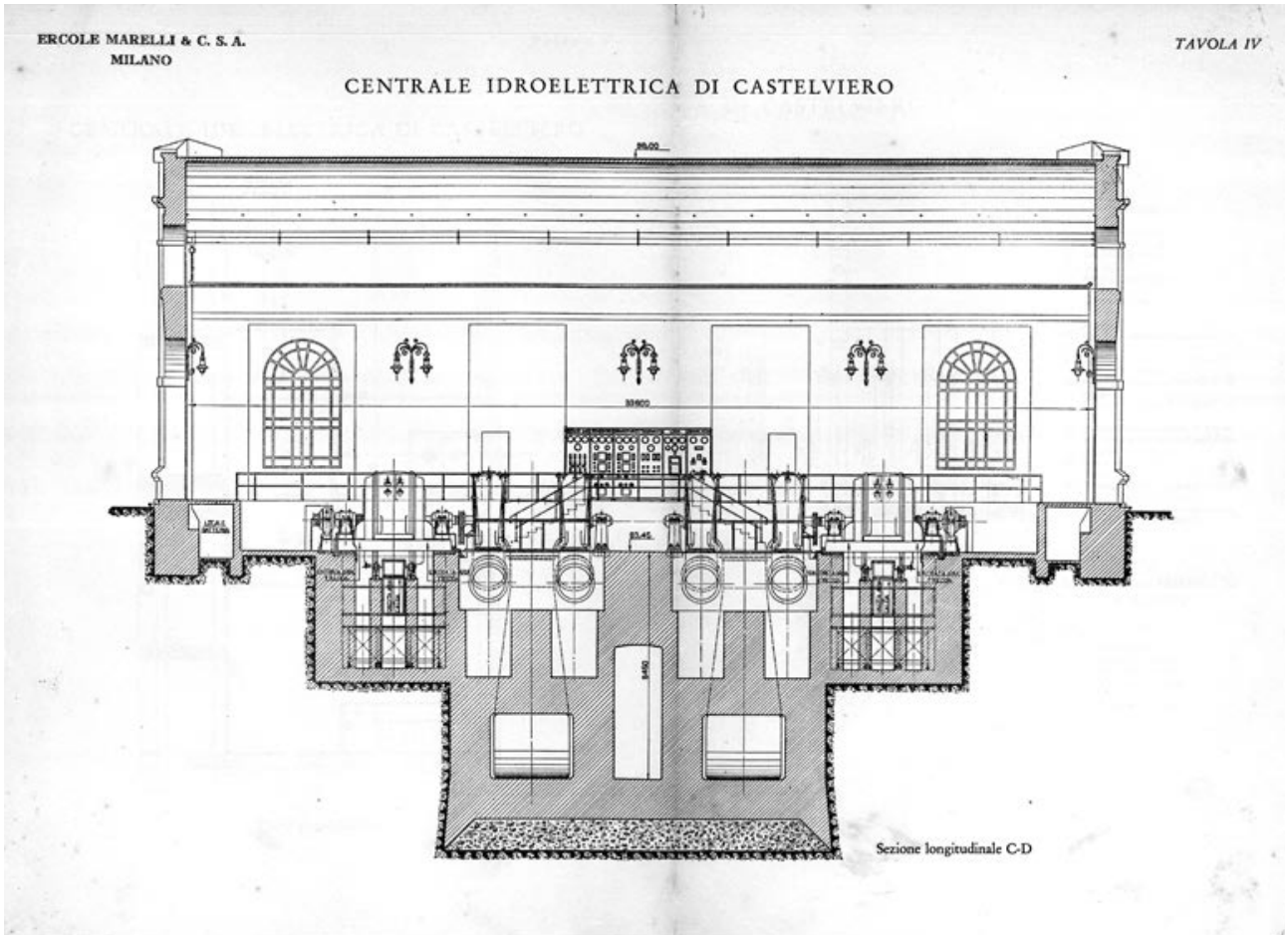
Picture 3.10

Picture 3.11

Picture 3.12



Drawing 3.1.5



Drawing 3.1.6

3.2. Surrounding of Edirne Power Plant's Cultural and Natural Value and its Site Analysis

3.2.1. Cultural and Natural Value of the Surrounding Building

Edirne Power Plant was build on a terrain which is now located on the edge of the protected area as defined by Edirne Cultural and Natural Heritage Protection Board the dated on 07.04.2003 and numbered 7697. The lot is the oldest cemetery in Edirne, certified as **Zindanaltı-Tatarhaniler Cemetery**. The land was indicated as Zindanaltı Cemetery in the land register documents of 1938. *(see Picture 3.2.1)*

The first excavations in the area of the Power Plant started on 05/30/2005 for determining the grave location of **Muhammed Bin Kutbiddin-i İzniki** who is a theologian of the 14th century. 20 meters south of the Power Plant, remains of scattered tombs and broken tombstones were found. One of the tombstone was from the 17th century, the other eight were from the 18th century. The broken tombstones were dated from the 15th century due to their inscriptions. Also, the remains of a wall with rubble masonry were found towards the south of the terrain. In addition, at the excavations, a few glasses, late periodic glazed and unglazed ceramics (meerschaum and ceramic vessel pieces) and a few ceramic vessels, which were made with sigraffitto technique from early period, have been found. *(see picture 3.2.2)*

Picture 3.13 Tatarhaniler Cemetery [4]

Picture 3.14 General view of the excavation

[4] *İşli H. Necdet; 'Edine Cementeris and Tombstones' Edirne Serhattaki Payıtaht, YKY, 1998*

In 2007, excavation resumed in the Power Plant lot. Four separate locations that were adjacent to the surounding wall were excavated. In these four boreholes have been found broken tombstones and graves in the various codes. In addition to the excavation works close to the Power Plant, other excavations were conducted at the back of the Hadimağa Foundations and near the entrance of the marketplace. Tombstones and skeletons were found in these sites. [5]

Thus, the result of these excavation works indicate that the Zindanaltı-Tatarhaniler Cemetery area was wider than actually visible today. *(see Map 3.2.1 and Map 3.2.2)*

There are no certain reasons why the Zindanaltı-Tatarhaniler Cemetery remained under the ground. Approximately, during the invasions of Edirne (Russian, Bulgarian and Greek invasions), many cemeteries were devastated and also floods destroyed the Zindanaltı-Tatarhaniler Cemetery.

Tatarhaniler Cemetery is mentioned in Ahmet Badi's book 'Riyaz-i Edirne' (189th page)' From Edirne conquest to İstanbul conquest in the last ninety-four years, scholars, government dignitaries, who died in Edirne, were buried in this cemetery. Many of the gravestones were devastated in 1833, in a time which coincides with Russian occupation of Adrianople (Edirne)'.

In 2013 April, Edirne Governorship cleaned the garden of the Power Plant. Some grave stones were found. *(see Picture 3.2.3 and Picture 3.2.4)*

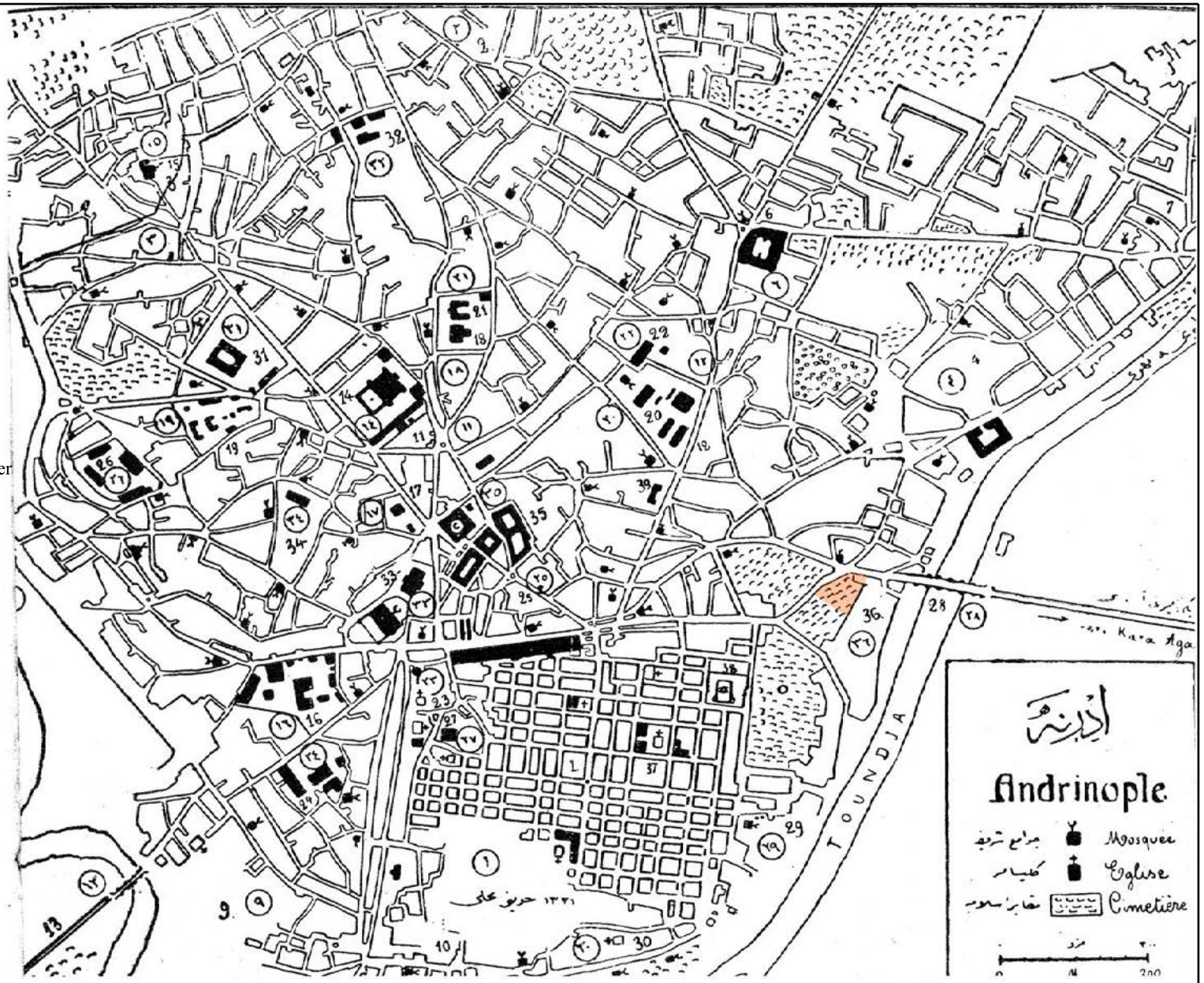
Picture 3.15 Some grave stone (2013)

Picture 3.16 (2013)

[5] *Report of Museum Management, 2007*

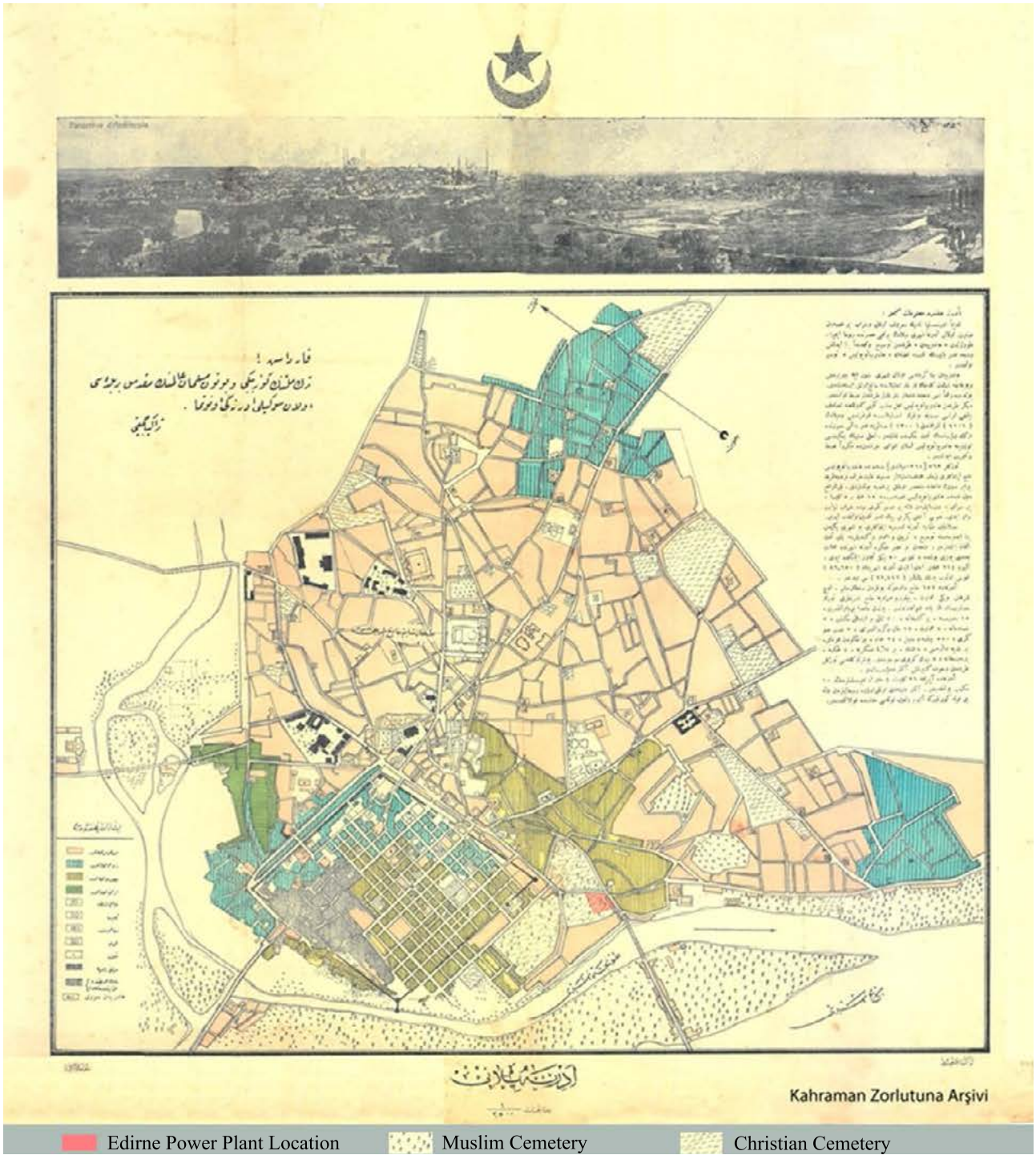
Map 3.2.1 19th Century

1) Kaleiçi
2) Kıyık
3) Muradiye
4) Süleymaniye
5) Saraçhane
6) Ayşekadın
7) Kirişhane
8) Tabakhane
9) At bazaar
10) Kafeskapı
11) Yedi yol ağzı
12) İstanbul road
13) Yanlızgöz Bridge
14) Sultan Selim Mosque
15) Muradiye Mosque
16) Governor Office
17) Municipality
18) Muslim Community office
19) Municipality Hospital
20) High School and Boy Teacher School
21) Girl Teacher School
22) Santa Maria Lurd (Nuns School)
23) Maarif Garden
24) Industry School
25) Ottoman Bank
26) Industry Quarter
27) Rum Jimnaz School
28) Old Bridge
29) Darü'l Hadis
30) Aya İstiratya Church
31) Millitary School
32) İş Yurdu
33) Commandery Office and Üç Şerefeli Mosque
34) Darü'l İrfan School
35) rüstempaşa Khan
36) Pier
37) Toros Armenian Church
38) Grand Synagogue
39) Ayans İsrailiyet School



Edirne Power Plant Location

Two maps have been found from Ottoman Period. (*Map 3.2.1 is* 19th Century, *Map 3.2.2 is 16th Century)* These maps show the Muslim and Christian Cemetery, and Edirne Power Plant is indeed located on its area. Therefore, Zindanaltı-Tatarhaniler Cemetery existence is clearly shown in these maps. *(see map 3.2.1 and Map 3.2.2)*



Map 3.2.2 (from Kahraman Zorlutuna Archive) 16th Century

3.2.2. Site Plan

Here, the surroundings of the location site was analysed. These are topography analysis, green area analysis, floor height analysis, land-use analysis and road analysis have shown to the tables. *(see from Table 3.2.1 to Table 3.2.6)*

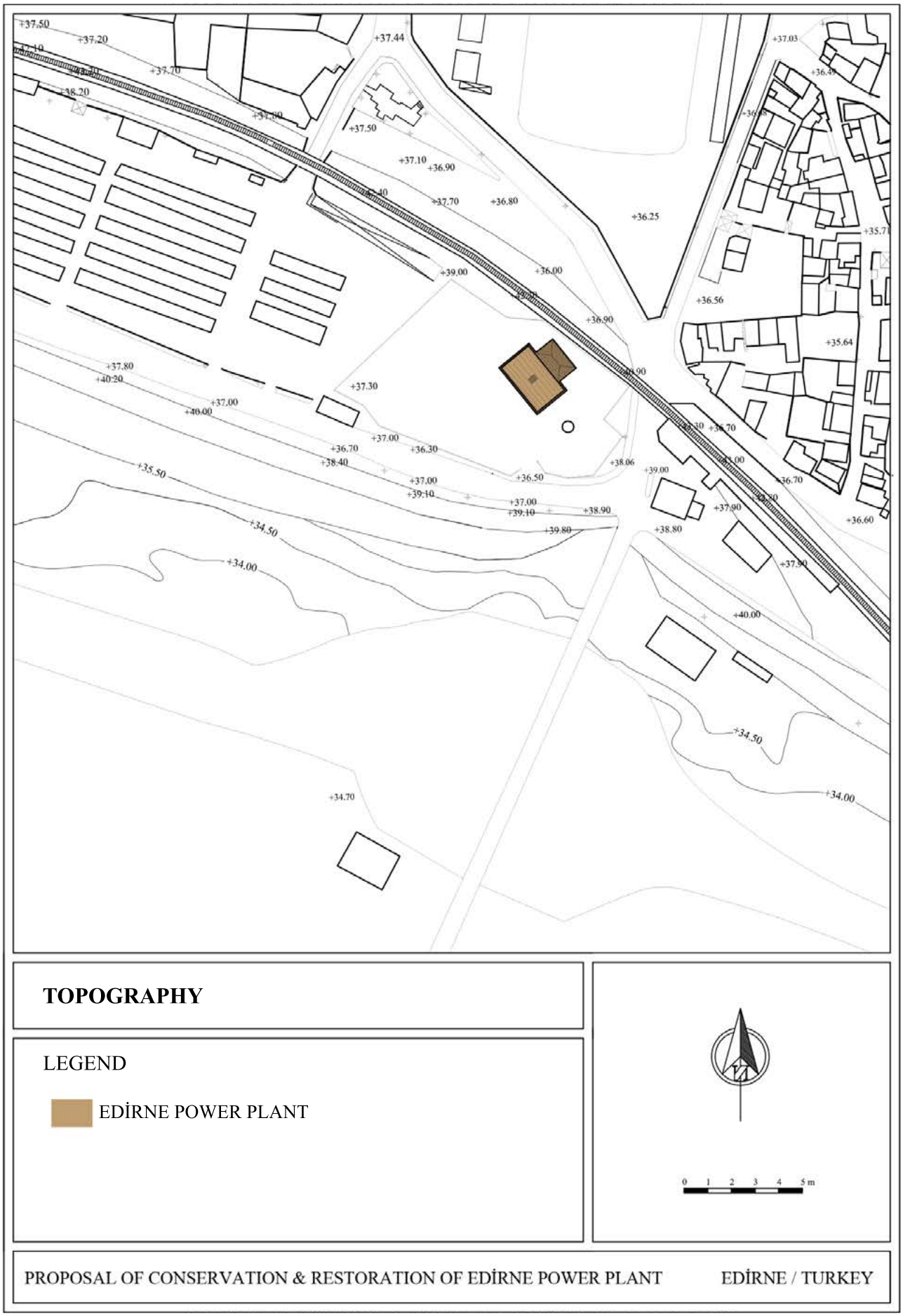

TOPOGRAPHY
LEGEND
EDİRNE POWER PLANT
0 1 2 3 4 5 m
PROPOSAL OF CONSERVATION & RESTORATION OF EDİRNE POWER PLANT
EDİRNE / TURKEY

Table 3.2.1

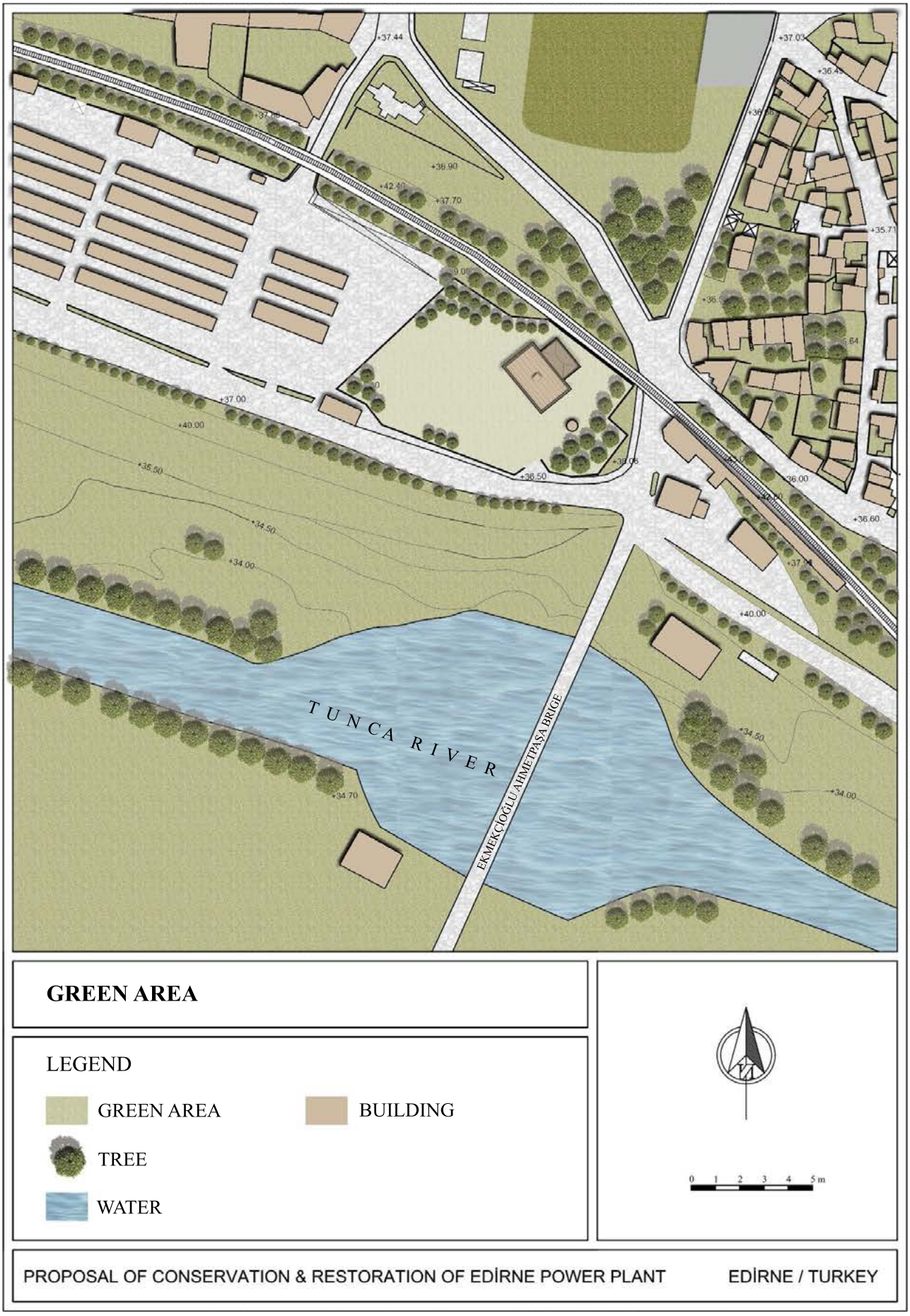

+37.44
+37.03
+36.90
+37.70
+35.71
+37.00
+40.00
+35.50
+36.50
+36.00
+36.60
+34.50
+34.00
+40.00
+34.50
+34.00
+34.70
TUNCA RIVER
EKMEKÇİOĞLU AHMETPAŞA BRİGE
GREEN AREA
LEGEND
GREEN AREA
BUILDING
TREE
WATER
0 1 2 3 4 5 m
PROPOSAL OF CONSERVATION & RESTORATION OF EDİRNE POWER PLANT
EDİRNE / TURKEY

Table 3.2.2

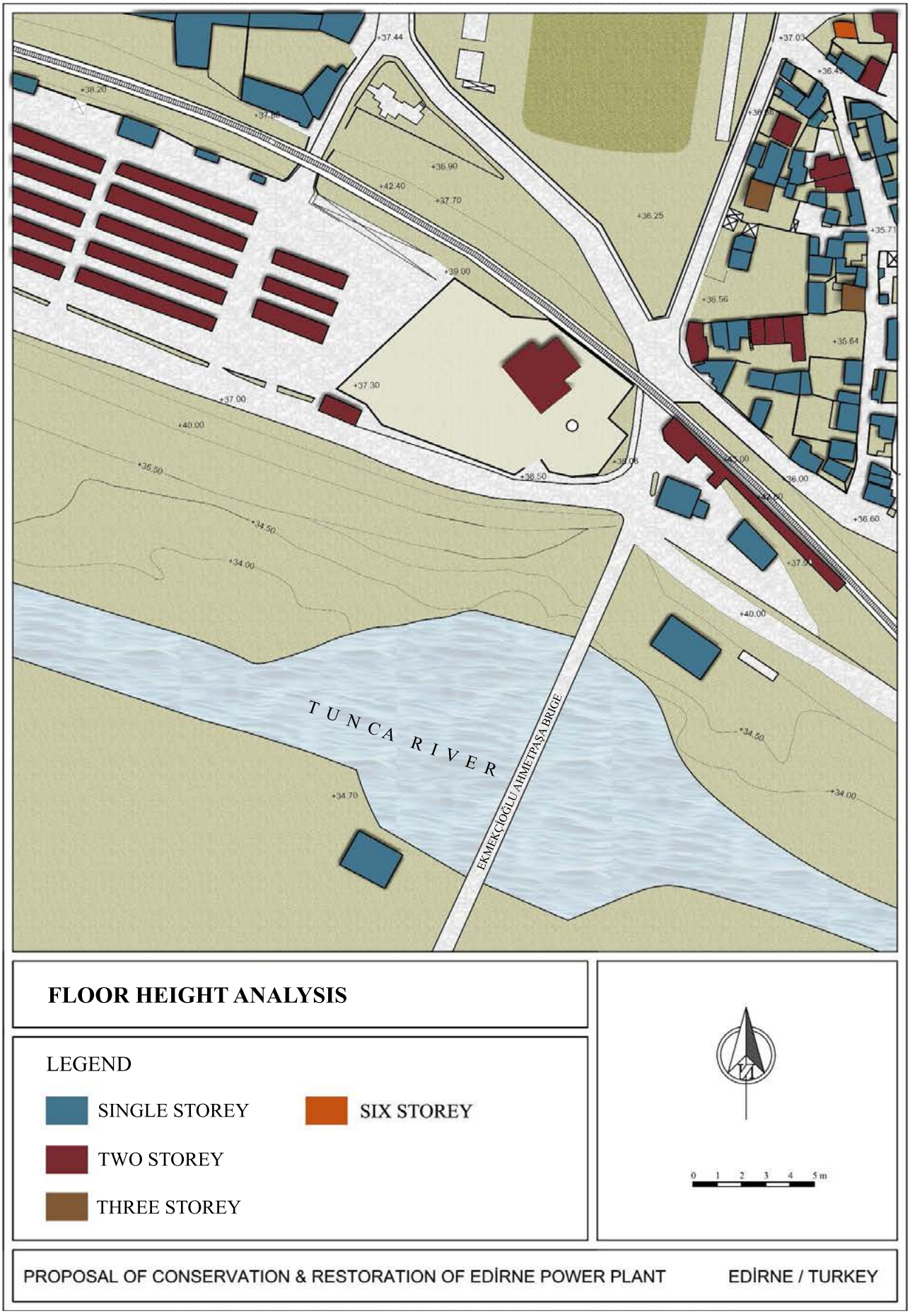

FLOOR HEIGHT ANALYSIS
LEGEND
SINGLE STOREY
SIX STOREY
TWO STOREY
THREE STOREY
TUNCA RIVER
EKMEKÇİOĞLU AHMETPAŞA BRIGE
0 1 2 3 4 5 m
PROPOSAL OF CONSERVATION & RESTORATION OF EDİRNE POWER PLANT
EDİRNE / TURKEY

Table 3.2.3

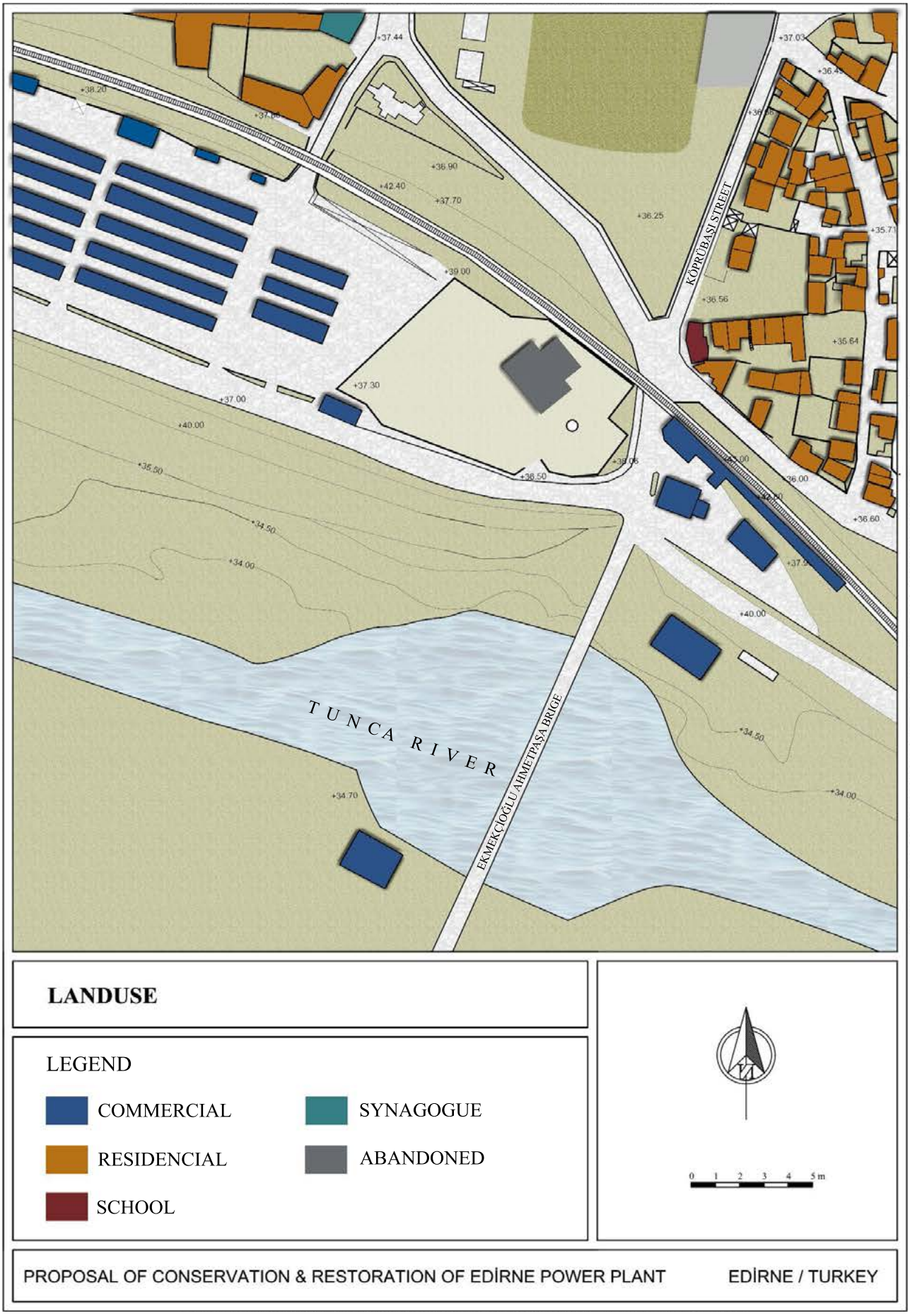

KÖPRÜBAŞI STREET
EKMEKÇİOĞLU AHMETPAŞA BRIGE
T U N C A R I V E R
LANDUSE
LEGEND
COMMERCIAL
RESIDENCIAL
SCHOOL
SYNAGOGUE
ABANDONED
0 1 2 3 4 5 m
PROPOSAL OF CONSERVATION & RESTORATION OF EDİRNE POWER PLANT
EDİRNE / TURKEY

Table 3.2.4

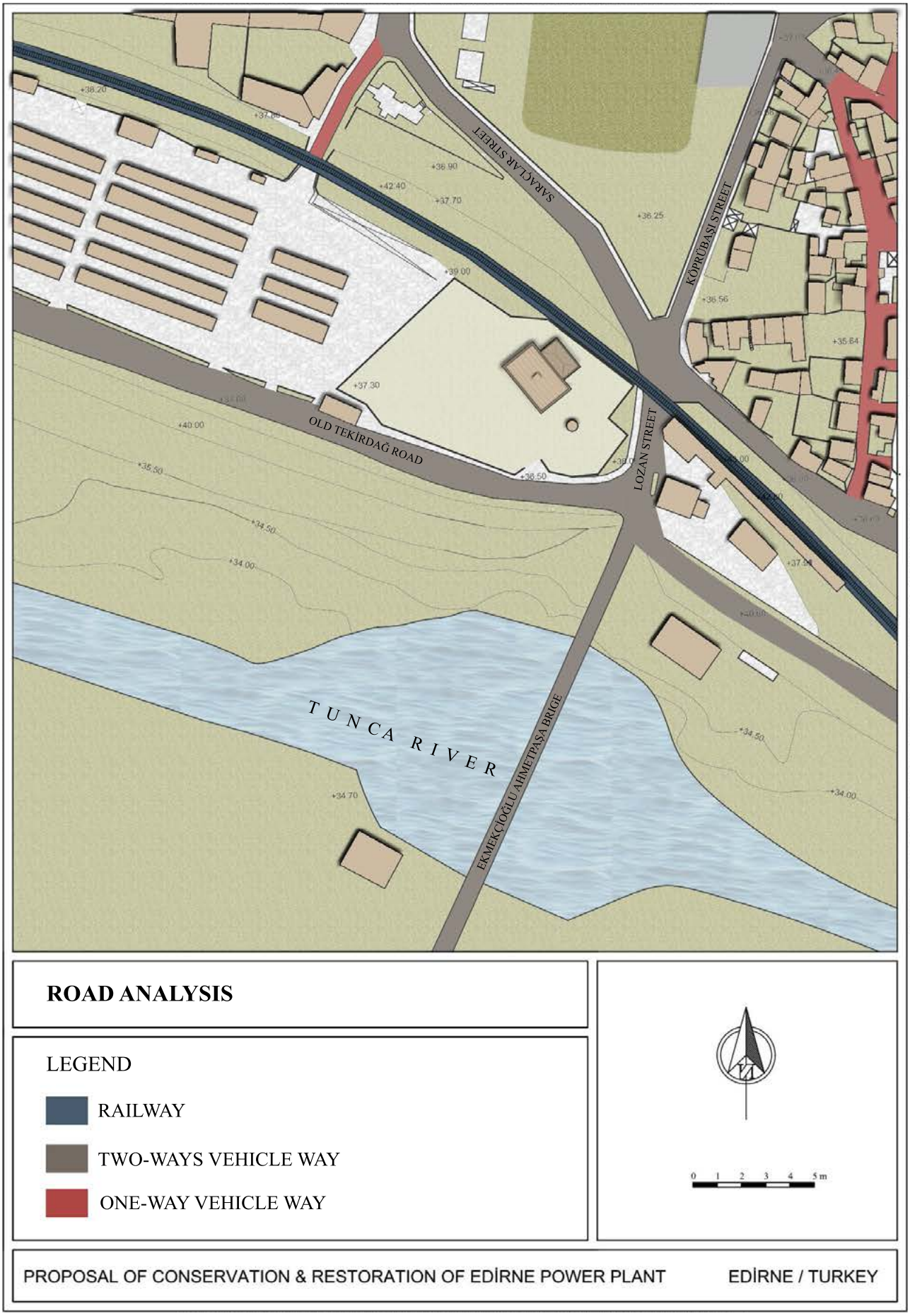

SARAÇLAR STREET
KÖPRÜBAŞI STREET
OLD TEKİRDAĞ ROAD
LOZAN STREET
T U N C A R I V E R
EKMEKÇİOĞLU AHMETPAŞA BRIGE
+38.20
+37.60
+36.90
+42.40
+37.70
+36.25
+39.00
+36.56
+35.84
+37.30
+40.00
+35.50
+34.50
+34.00
+38.50
+37.54
+34.70
ROAD ANALYSIS
LEGEND
RAILWAY
TWO-WAYS VEHICLE WAY
ONE-WAY VEHICLE WAY
0 1 2 3 4 5 m
PROPOSAL OF CONSERVATION & RESTORATION OF EDİRNE POWER PLANT
EDİRNE / TURKEY

Table 3.2.5

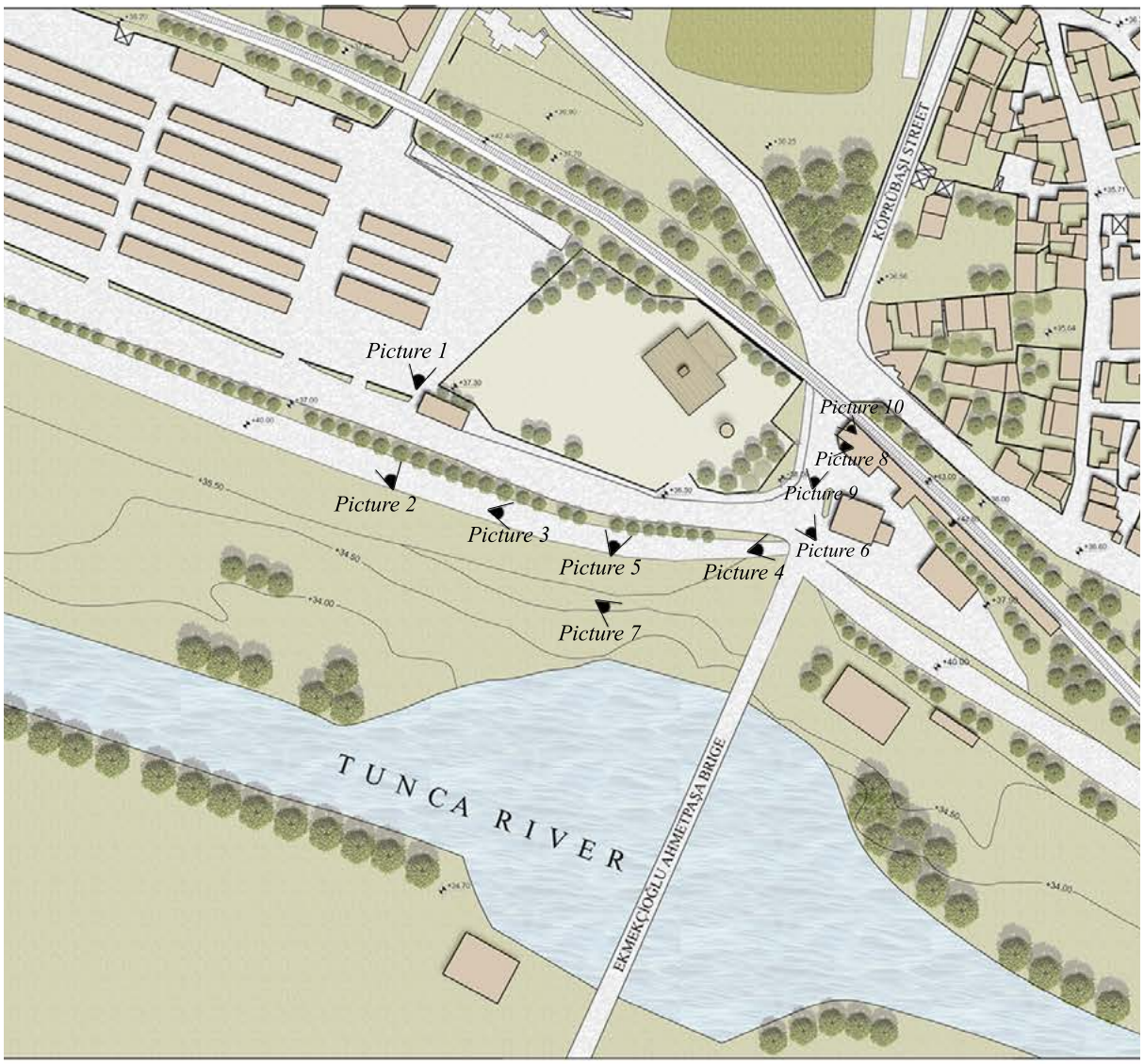


Table 3.2.6

Picture 1

Picture 2

Picture 3

Picture 4

Picture 5

Picture 6

Picture 7 Ekmekçioğlu Bridge

Picture 8

Picture 9

Picture 10

4. THE EVALUATION OF EDİRNE POWER PLANT EXISTING CONDITION

4.1. Survey Drawings

4.1.1. Available Documentation

2002: A measured survey and survey drawings have been made by ÇEKÜL (The Protection and Promotion of the Environment and Cultural Heritage).

2008: An architecture master thesis 'Proposal of Conservation of Edirne Power Plant and Edirne's Power Distribution Units' was written by Hatice Çiğdem Zağra, at the faculty of Architecture, University of Trakya, under the guidance of Prof. Dr. Nevzat İlhan.

2010: The Ani Architecture Office re-planned the Edirne Power Plant.

4.1.2. Personal Survey Operations

The personal survey operations were aimed at checking and implementing the data coming from the available recent documentation.

4.1.2.1. Operation of measurements

Since a recent thorough measured survey was conduced in 2002 by Çekül (The protection and Promotion of the Environment and Cultural Heritage) my own personal measurements intended to control the accuracy of this survey and complete the information where the data were missing. The process was done using a laser measurer and a typical measuring tape. The survey process started by identifying each room with a different number and letter (R01, R02, R03.... etc.). After that, each rooms' height, length and diagonals measures were taken following the triangulation method. All the openings (windows, doors...etc.) and architectural details were also measured as well as certain structural elements such as beams and columns.

4.1.2.2. Operation of drawing

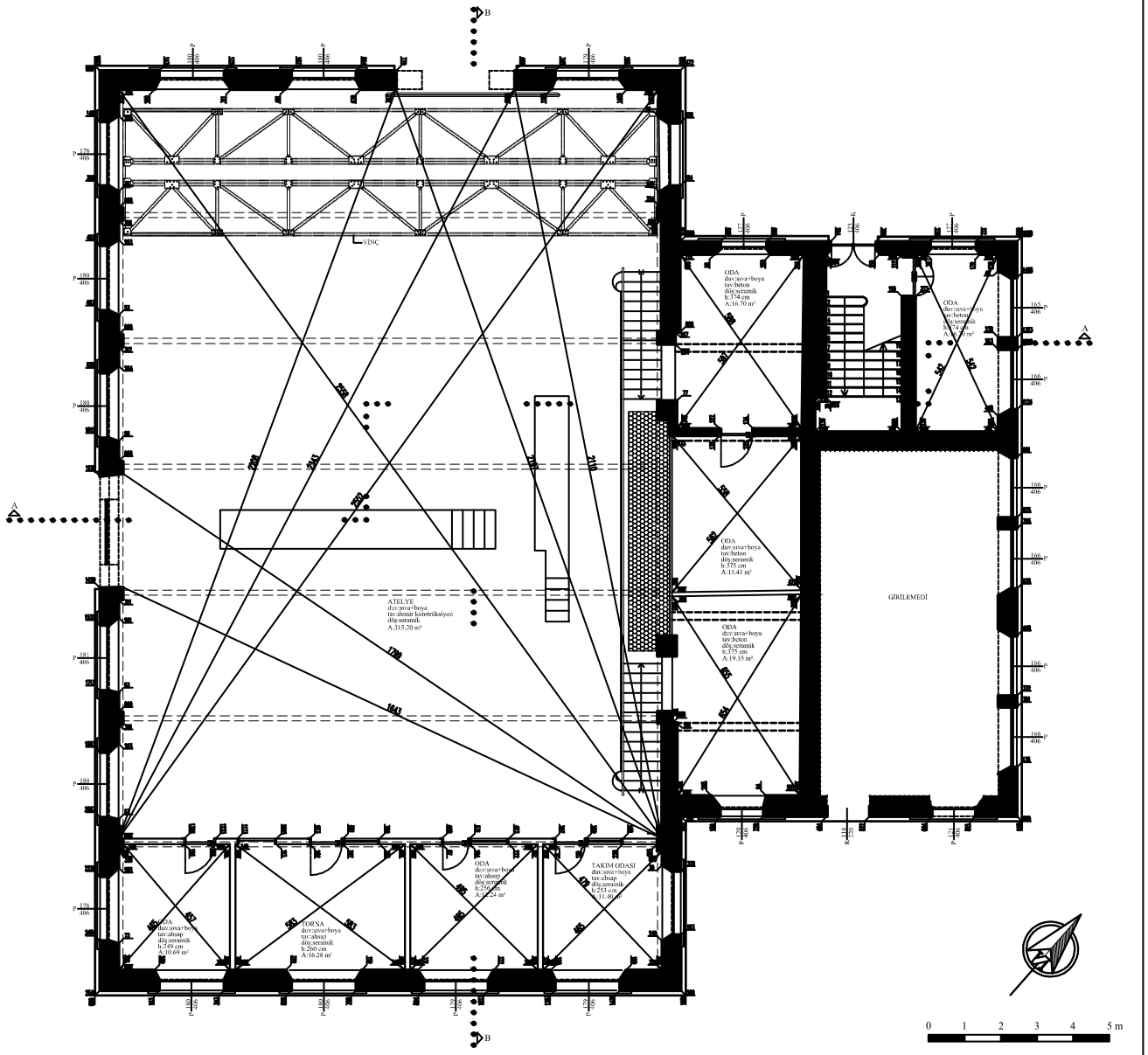
After the operation of measurements, it was verified all the drawings given by Çekül (Drawing 4.1.1 to 4.1.9) correcting all the inaccuracies and adding some missing elements. Taking into account these drawings, it was produced a whole set of new drawings as details of the structure, windows, ceilings etc... (See Drawing 4.1.10 to Drawing 4.1.27).

After the basic drawings of the actual state were completed, the Material Lists were prepared to know what kind of materials were used. (see Material Lists from M01 to M13). The final step of this thesis started by drawings and analyses of the building and the best ways to adapt it for the new function selected. The Drawing 6.2.1 till 6.2.15 are part of the new plan layout, with the new rooms, structures (such as the mezzanine floor) and exterior landscape design.

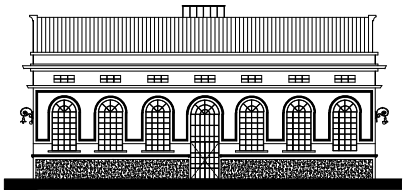
4.1.2.3. Survey of decay

The survey of the actual decay was the biggest part. A thorough set of photos was taken to each wall of all the rooms, using Nikon D5100. Analysing the pictures, a deep research was carried in order to identify the different kinds of decay and their respective causes, finally all this data was collected in a table in order to be easily understandable. After exporting the pictures to Auto-cad, they were used as a background for the final drawing where each specific areas of the decay were individualized and properly identified using different colours and hatches.

Drawing 4.1.1



EDİRNE MUNICIPALITY OLD POWER PLANT RESTORATION 2002



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WEB: http://www.anitsal.com E-MAIL: anitsal@anitsal.com

MAY 2002	NAME	DIPLOMA NO	SIGNITURE
RESTITUTION RLV	M.FIKRI AKTAN	1973 - 337	

SURVEY PROJECT

SCALE: 1/10 1/20 1/5 1/2

PROJECT	ÇEKÜL	ÇEVRE VE KÜLTÜR DEĞERLERİNİ KORUMA VE TANITMA VAKFI
PROJECT ADVISER		PROF. DR. METİN SÖZEN DOÇ. DR. BERRİN ALPER DR. MEHMET ALPER
PROJECT AUTHOR		M. FİKRİ AKTAN (ARCHITECT)
DRAWING	ARCHITECT	ÖZGÜR SEVİM
	ARCHITECT	EBRU ERDEN
	TOPOGRAPHY	ABDULLAH ÜNSAL

TURES TURİZM PLANLAMA RESTORASYON SANAYİ VE TİCARET LTD. ŞTİ.

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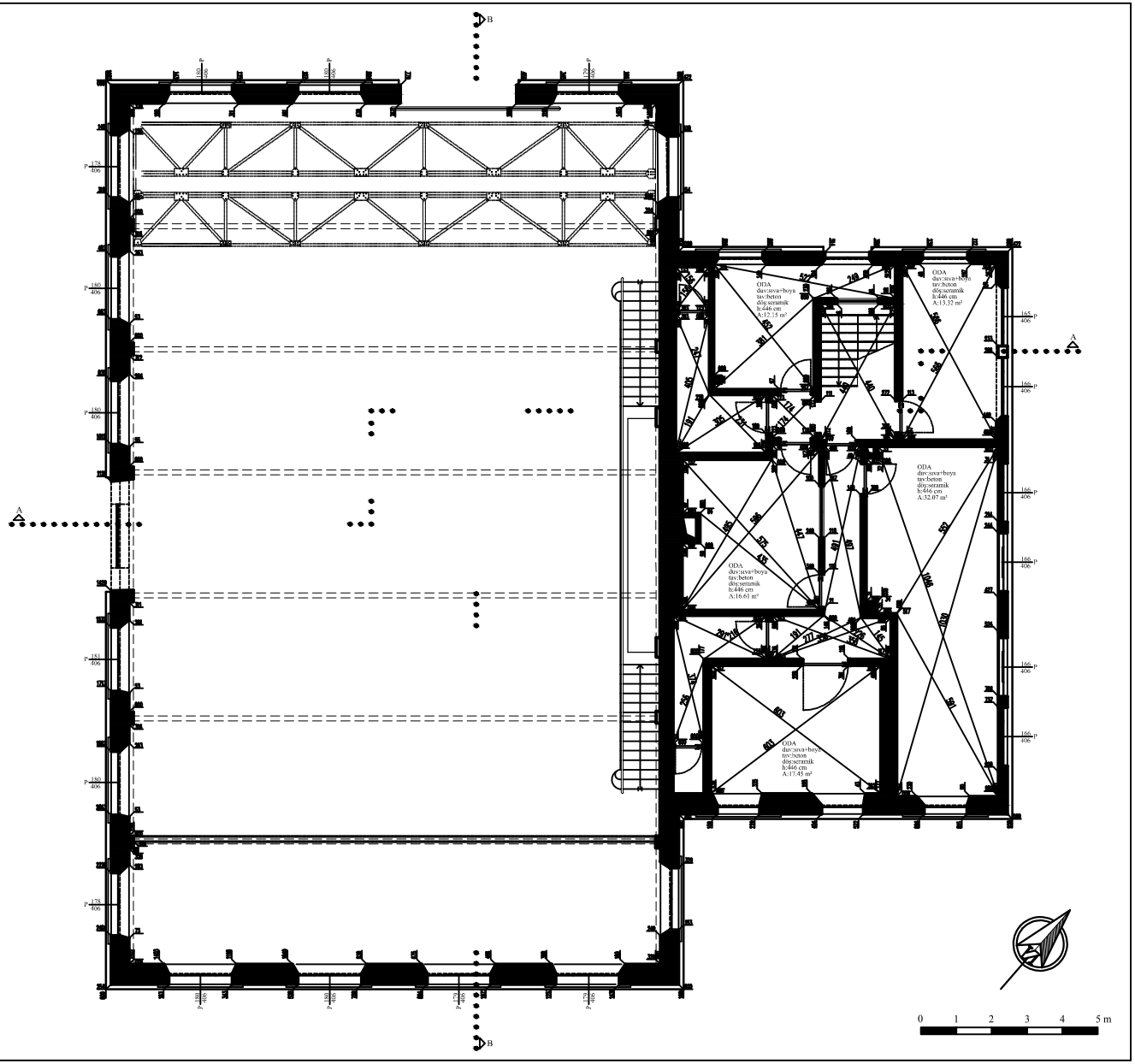
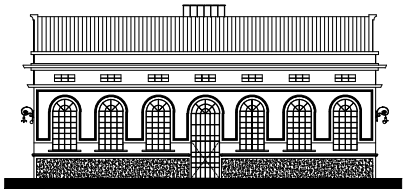
GROUND FLOOR PLAN

SHEET NO 01

Drawing 4.1.2



EDİRNE MUNICIPALITY
OLD POWER PLANT
RESTORATION 2002



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SURVEY PROJECT

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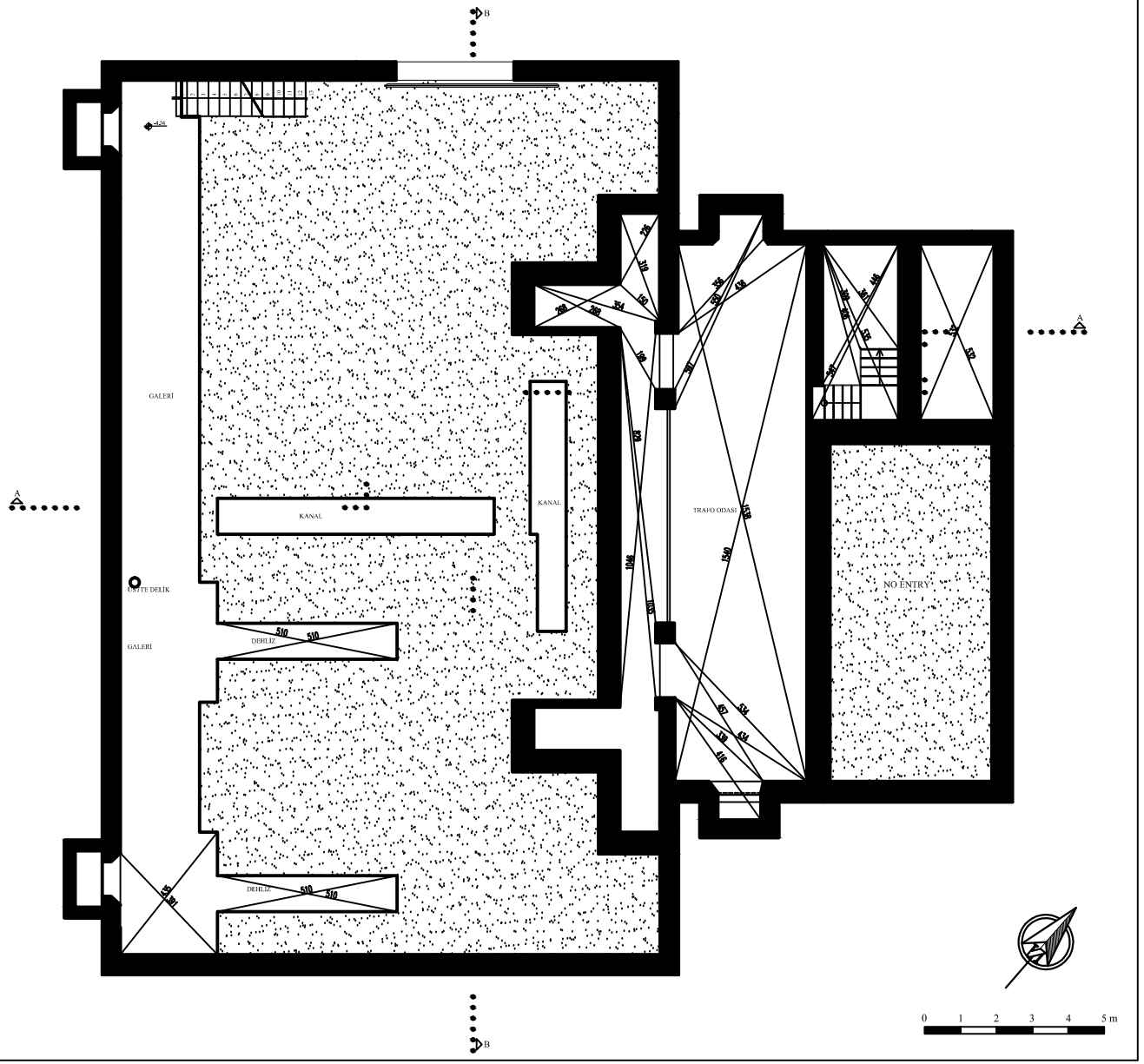
ANITSAL YAPILARI KORUMA DEĞERLENDİRME VE YAPIM MİMARLIK RESTORASYON LTD. ŞTİ. http://www.anitsal.com	DRAWING	ARCHITECT ÖZGÜR SEVİM ARCHITECT EBRU ERDEN TOPOGRAPHY ABDULLAH ÜNSAL

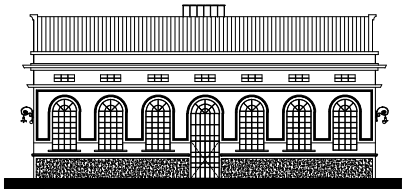
FIRST FLOOR PLAN

SHEET NO **02**

Drawing 4.1.3



EDİRNE MUNICIPALITY
OLD POWER PLANT
RESTORATION 2002



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SURVEY PROJECT

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DRAWING	ARCHITECT	ÖZGÜR SEVİM
	ARCHITECT	EBRU ERDEN
	TOPOGRAPHY	ABDULLAH ÜNSAL

ÇEKÜL — ÇEVRE VE KÜLTÜR DEĞERLERİNİ KORUMA VE TANITMA VAKFI

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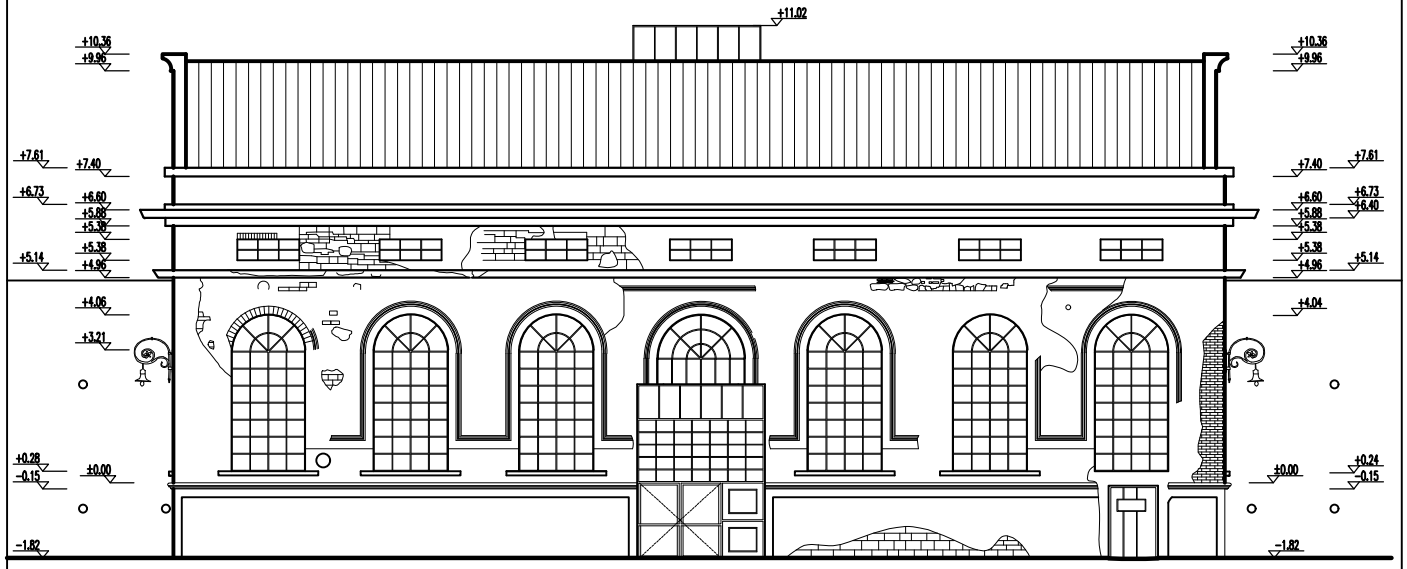
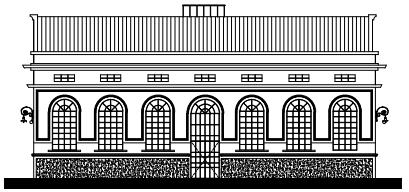
BASEMENT FLOOR PLAN

SHEET NO **03**

Drawing 4.1.4



EDİRNE MUNICIPALITY
OLD POWER PLANT
RESTORATION 2002



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SURVEY PROJECT

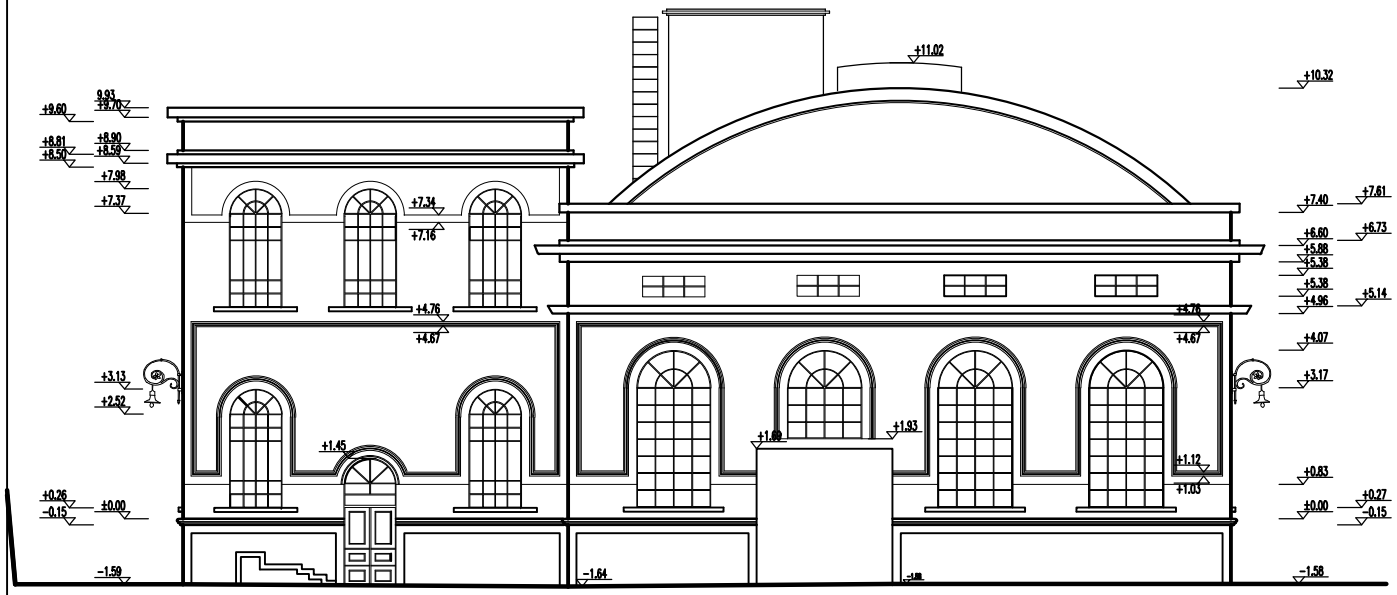
SCALE: 1/10 1/20 1/5 1/2

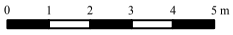
ÇEKÜL	PROJECT	ÇEKÜL ÇEVRE VE KÜLTÜR DEĞERLERİNİ KORUMA VE TANITMA VAKFI
TURES TURİZM PLANLAMA RESTORASYON SANAYİ VE TİCARET LTD. ŞTİ.	PROJECT ADVISER	PROF. DR. METİN SÖZEN DOÇ. DR. BERRİN ALPER DR. MEHMET ALPER
	PROJECT AUTHOR	M. FİKRİ AKTAN (ARCHITECT)
ANITSAL YAPILARI KORUMA DEGERLENDIRME VE YAPIM MIMARLIK RESTORASYON LTD. ŞTİ.	DRAWING	ARCHITECT ÖZGÜR SEVİM ARCHITECT EBRU ERDEN TOPOGRAPHY ABDULLAH ÜNSAL

SOUTHWEST ELEVATION

SHEET NO **04**

Drawing 4.1.5





EDİRNE MUNICIPALITY
OLD POWER PLANT
RESTORATION 2002

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SURVEY PROJECT

SCALE: 1/10 1/20 1/5 1/2

ÇEKÜL ÇEVRE VE KÜLTÜR DEĞERLERİNİ KORUMA VE TANITMA VAKFI	PROJECT	ÇEKÜL ÇEVRE VE KÜLTÜR DEĞERLERİNİ KORUMA VE TANITMA VAKFI
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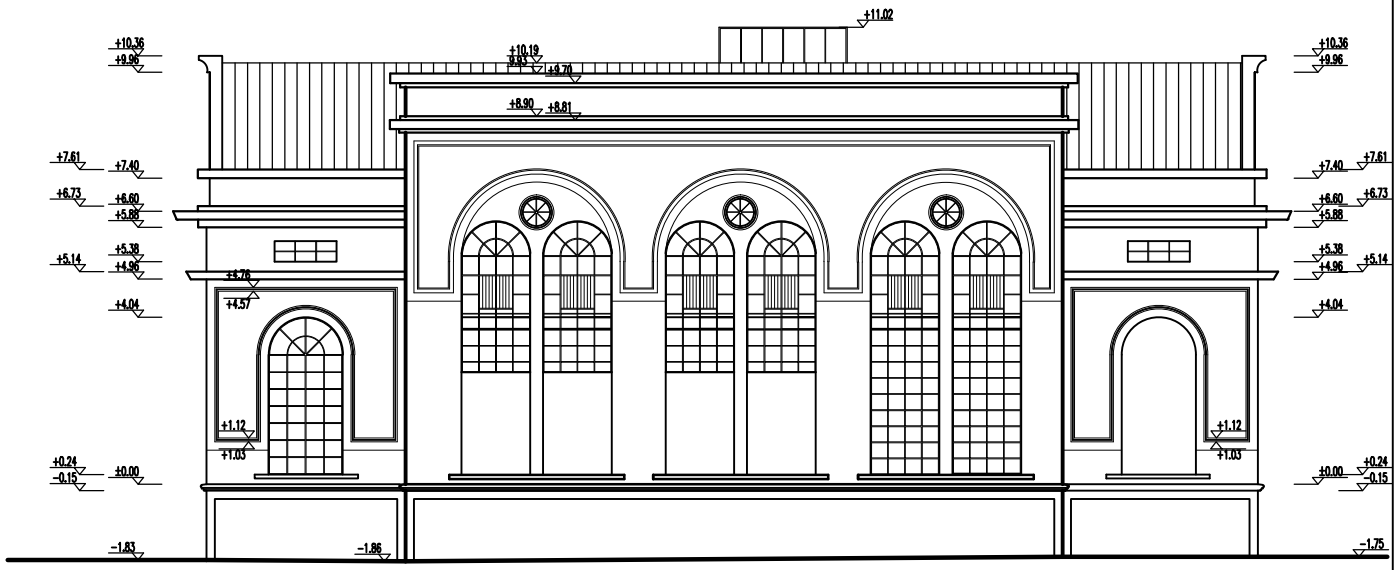
ANITSAL YAPILARI KORUMA DEGERLENDIRME VE YAPIM MIMARLIK RESTORASYON LTD. STI. http://www.anitsal.com	DRAWING	ARCHITECT ÖZGÜR SEVİM ARCHITECT EBRU ERDEN ABDULLAH ÜNSAL

NORTHWEST ELEVATION

SHEET NO **05**

Drawing 4.1.6



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OLD POWER PLANT
RESTORATION 2002

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SURVEY PROJECT

SCALE: 1/10 1/20 1/5 1/2

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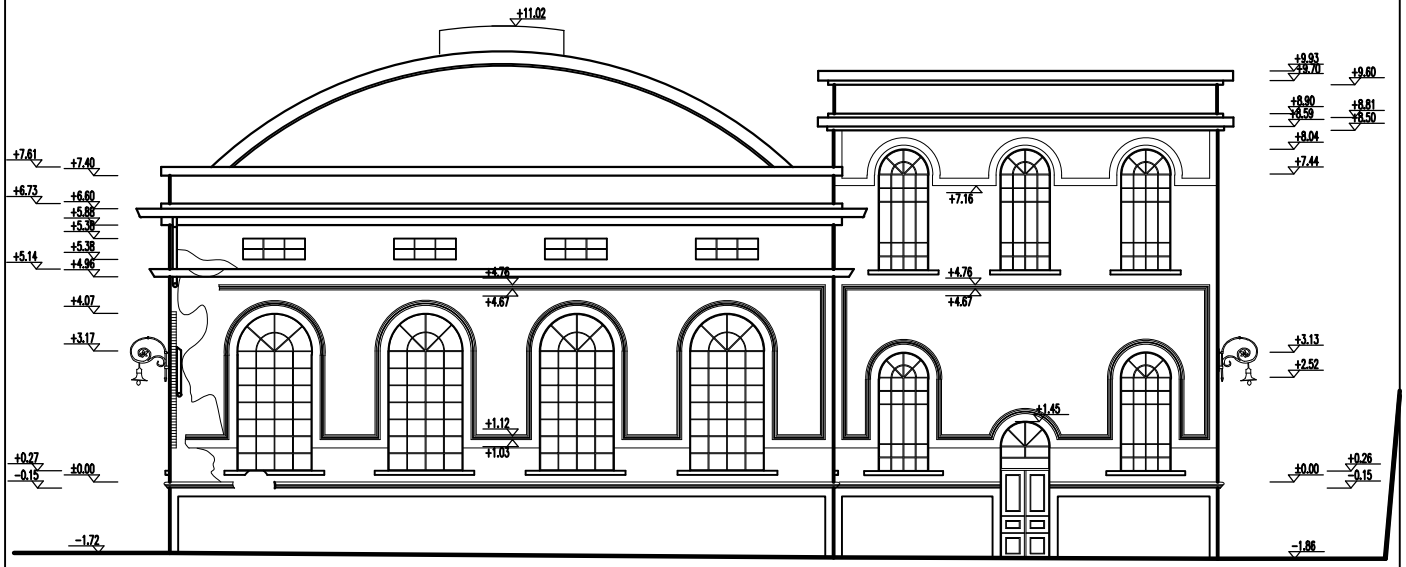
PROJECT ADVISER	PROF. DR. METİN SÖZEN DOÇ. DR. BERRİN ALPER DR. MEHMET ALPER	
PROJECT AUTHOR	M. FİKRİ AKTAN (ARCHITECT)	
DRAWING	ARCHITECT	ÖZGÜR SEVİM
	ARCHITECT	EBRU ERDEN
	TOPOGRAPHY	ABDULLAH ÜNSAL

NORTHEAST ELEVATION

SHEET NO **06**

Drawing 4.1.7



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OLD POWER PLANT
RESTORATION 2002

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SURVEY PROJECT

SCALE: 1/10 1/20 1/5 1/2

PROJECT	ÇEKÜL	ÇEVRE VE KÜLTÜR DEĞERLERİNİ KORUMA VE TANITMA VAKFI
PROJECT ADVISER	PROF. DR. METİN SÖZEN DOÇ. DR. BERRİN ALPER DR. MEHMET ALPER	
PROJECT AUTHOR	M. FİKRİ AKTAN (ARCHITECT)	
DRAWING	ARCHITECT	ÖZGÜR SEVİM
	ARCHITECT	EBRU ERDEN
	TOPOGRAPHY	ABDULLAH ÜNSAL

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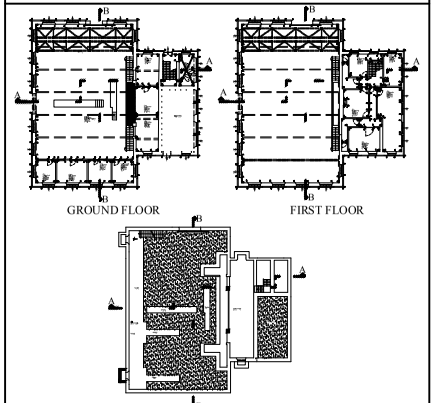
SOUTHEAST ELEVATION

SHEET NO **07**

Drawing 4.1.8

EDİRNE MUNICIPALITY OLD POWER PLANT RESTORATION 2002



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SURVEY PROJECT

SCALE: 1/10 1/20 1/5 1/2

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	PROJECT AUTHOR	M. FİKRİ AKTAN (ARCHITECT)
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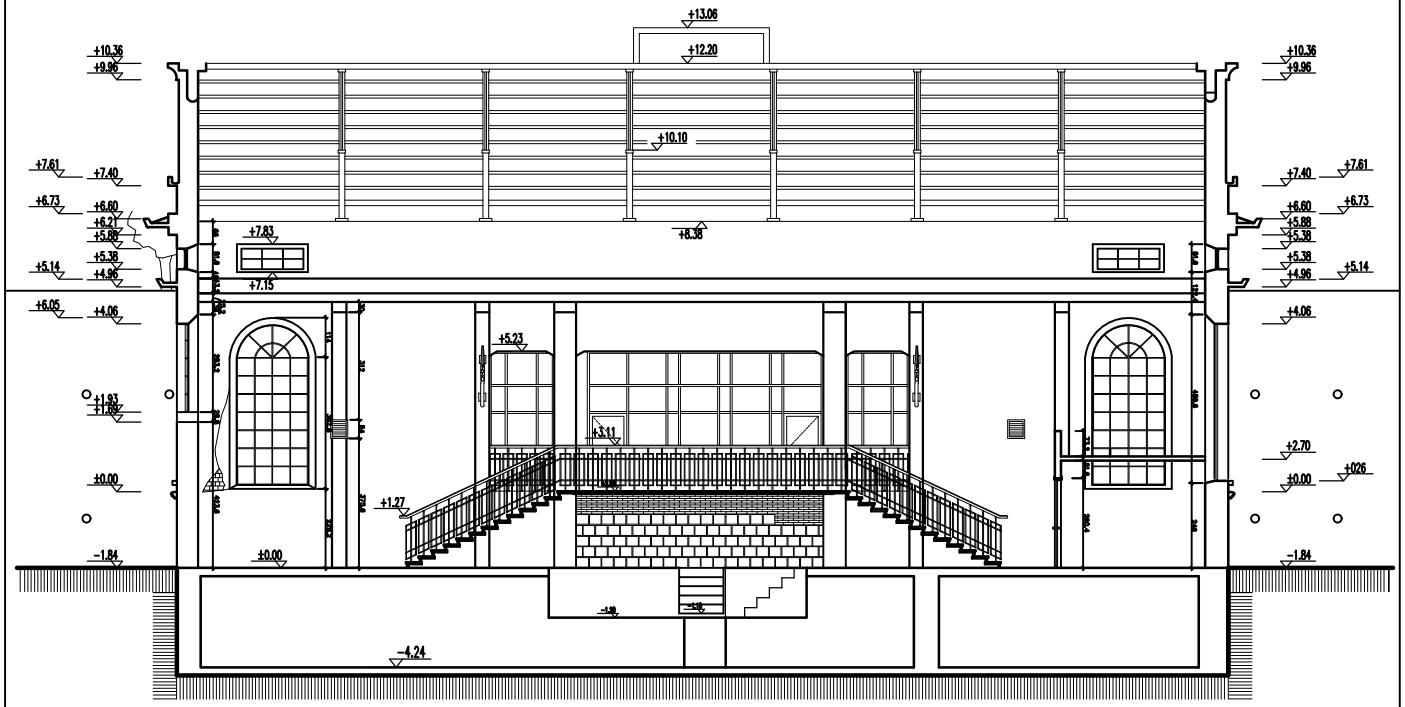
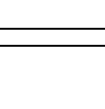
SECTION A-A

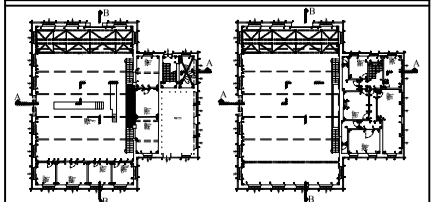
SHEET NO 08

Drawing 4.1.9





EDİRNE MUNICIPALITY OLD POWER PLANT RESTORATION 2002



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SURVEY PROJECT

SCALE: 1/10 1/20 1/5 1/2

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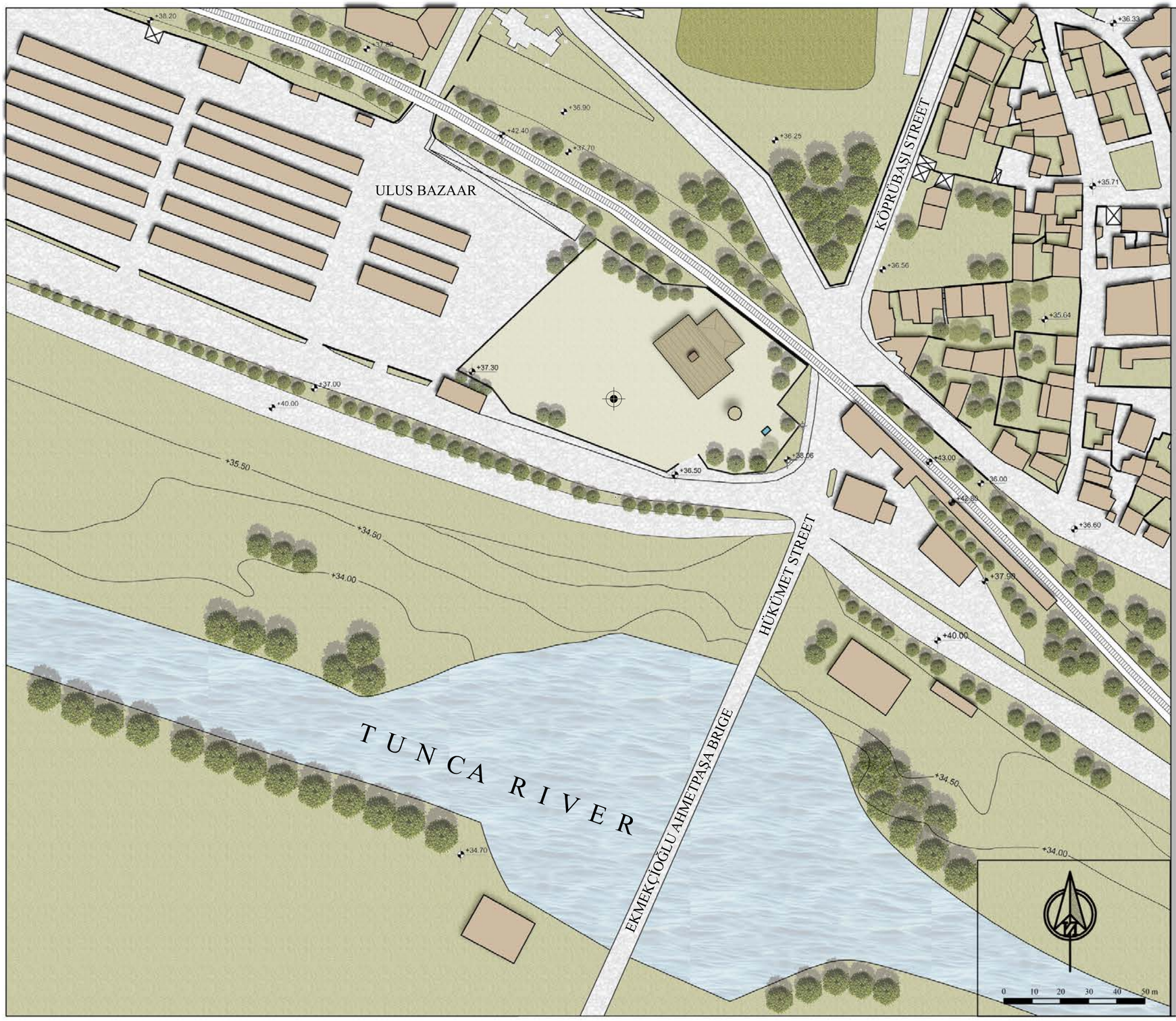
SECTION B-B

SHEET NO **09**



POLITECNICO DI MILANO
ARCHITECTURE FACULTY
MASTER OF ARCHITECTURE
LEONARDO CAMPUS

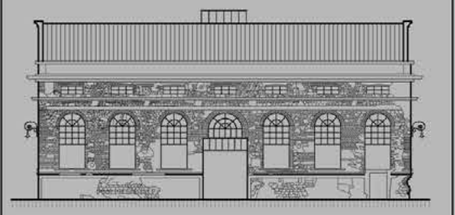
EDİRNE OLD ELECTRICAL FACTORY
PROPOSAL OF RESTORATION
EDİRNE / TURKEY

CONSULTANTS:
ASST. PROF. GIULIANA CARDANI
ASST. PROF. SYLVIE DUVERNOY
ASST. PROF. MEHMET ALPER

STUDENT:
ÖZGE NOYAN

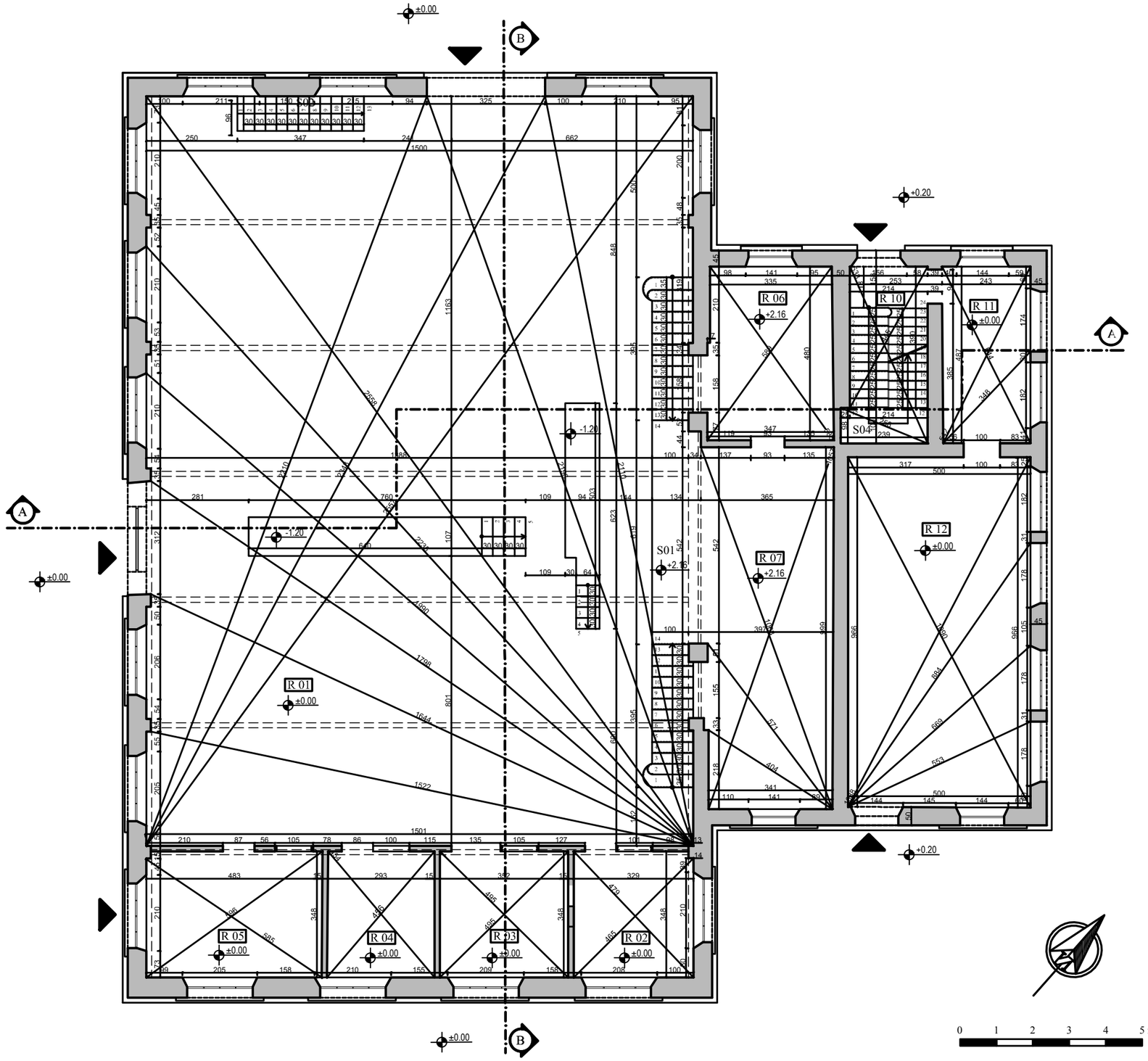
SITE PLAN

- EDİRNE POWER PLANT
- BUILDINGS
- POOL
- TUNCA RIVER
- ARCHEOLOGICAL FIELD



SHEET NAME:	SITE PLAN
SHEET NUMBER:	01

Drawing 4.1.10



POLITECNICO DI MILANO
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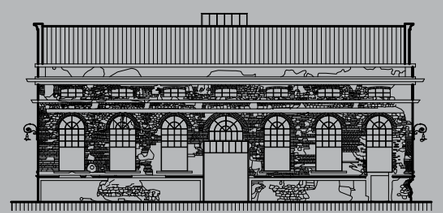
JULY 2013

A PROPOSAL FOR THE RESTORATION AND THE REUSE OF THE DISMISSED POWER PLANT OF EDİRNE, TURKEY

THESIS SUPERVISOR:
ARCH. GIULIANA CARDANI
THESIS CO-SUPERVISORS:
ARCH. SYLVIE DUVERNOY
ARCH. MEHMET ALPER

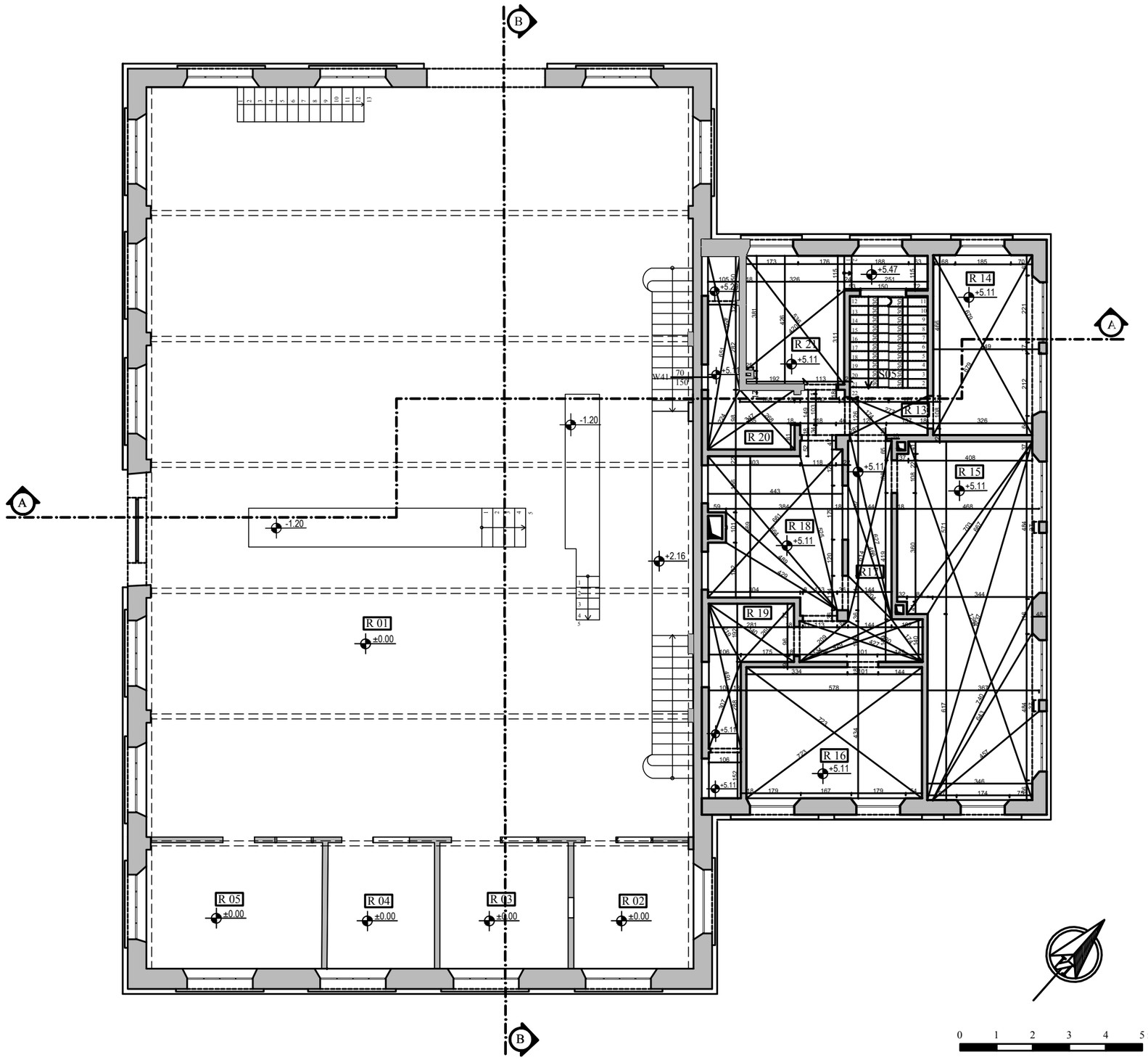
STUDENT:	NUMBER:
ÖZGE NOYAN	764300

SURVEY



SHEET NAME:	GROUND FLOOR PLAN
SHEET NUMBER:	**11**

Drawing 4.1.11



POLITECNICO DI MILANO
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ARCH. MEHMET ALPER

STUDENT:	NUMBER:
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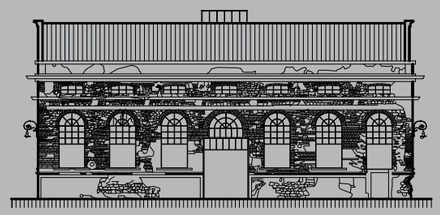
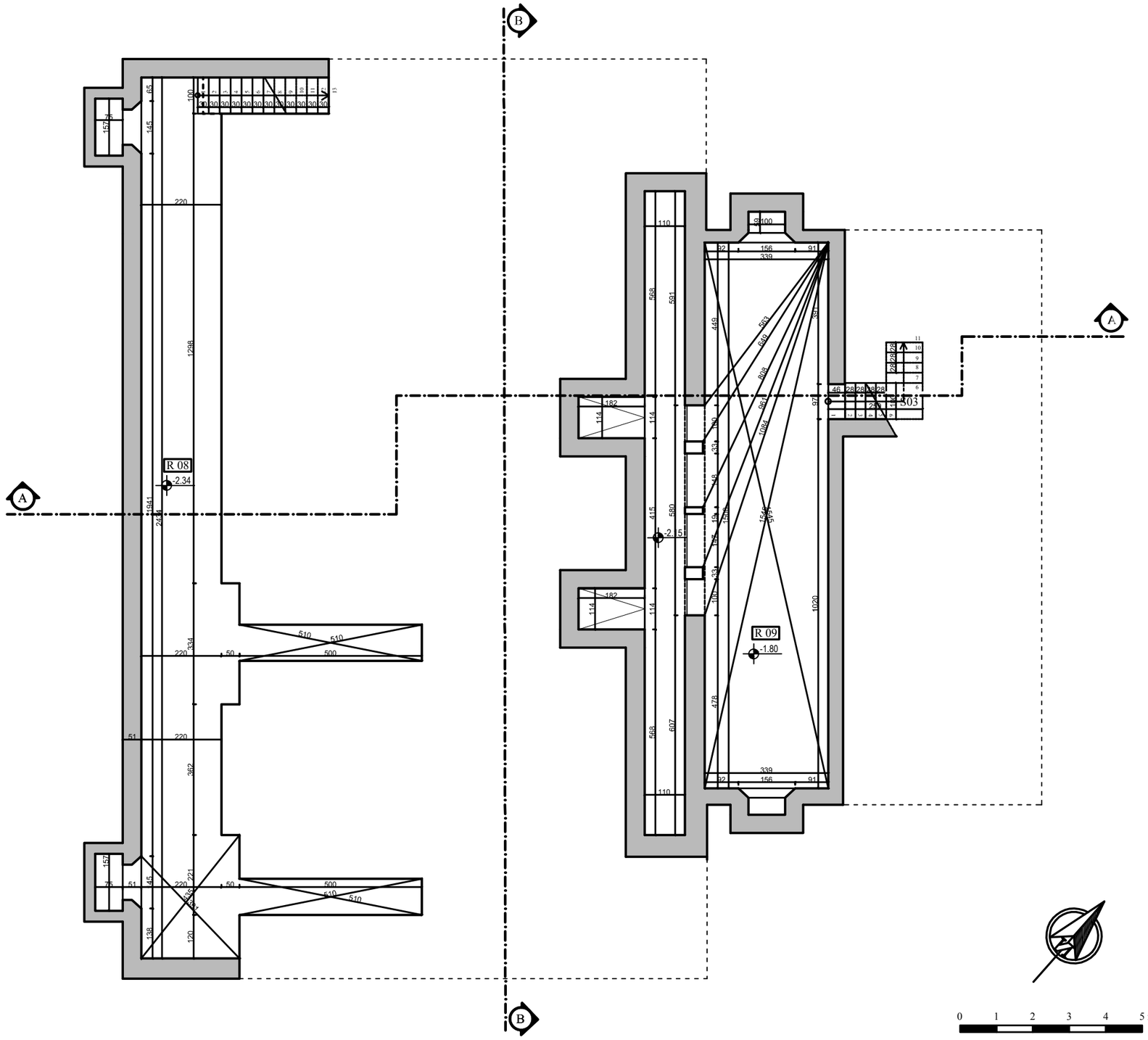
SURVEY



SHEET NAME:	FIRST FLOOR PLAN
SHEET NUMBER:	**12**

Drawing 4.1.12



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ARCH. MEHMET ALPER

STUDENT:	NUMBER:
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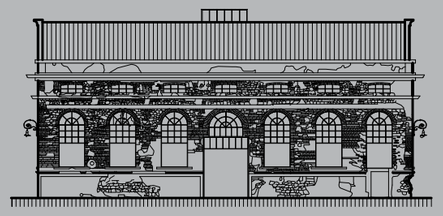
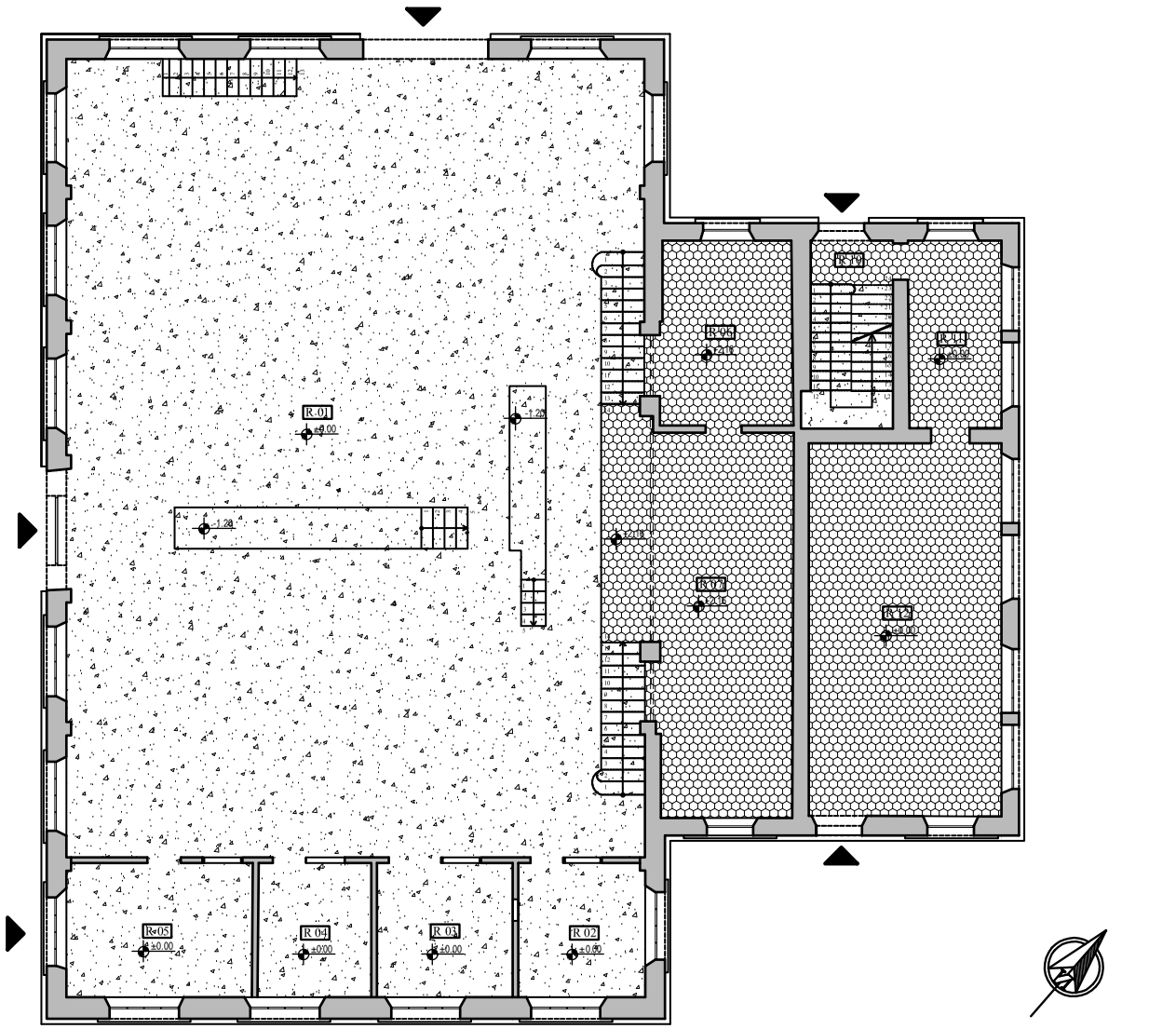
SURVEY



SHEET NAME:	BASEMENT PLAN
SHEET NUMBER:	**13**

Drawing 4.1.13

Drawing 4.1.14



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SURVEY

LEGEND

CONCRETE

HEXAGON BRICK TILE

SHEET NAME:	GROUND FLOOR PAVEMENT PLAN
SHEET NUMBER:	**14**

Drawing 4.1.15

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SURVEY

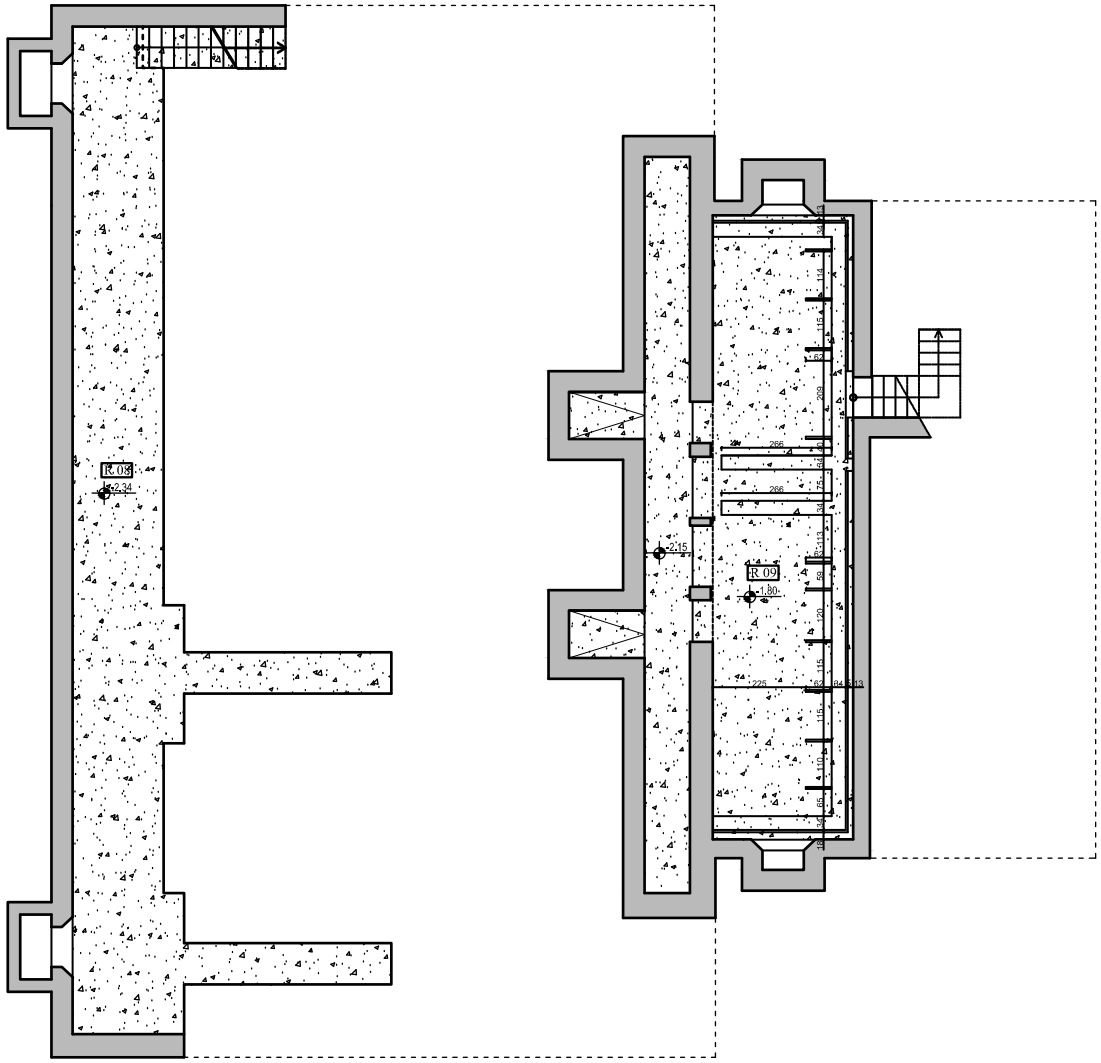
LEGEND

CONCRETE

HEXAGON BRICK TILE

SHEET NAME:	FIRST FLOOR PAVEMENT PLAN
SHEET NUMBER:	**15**

Drawing 4.1.16



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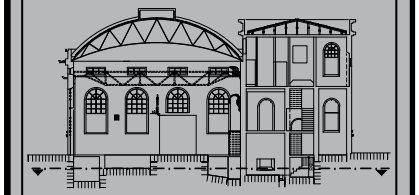
SURVEY

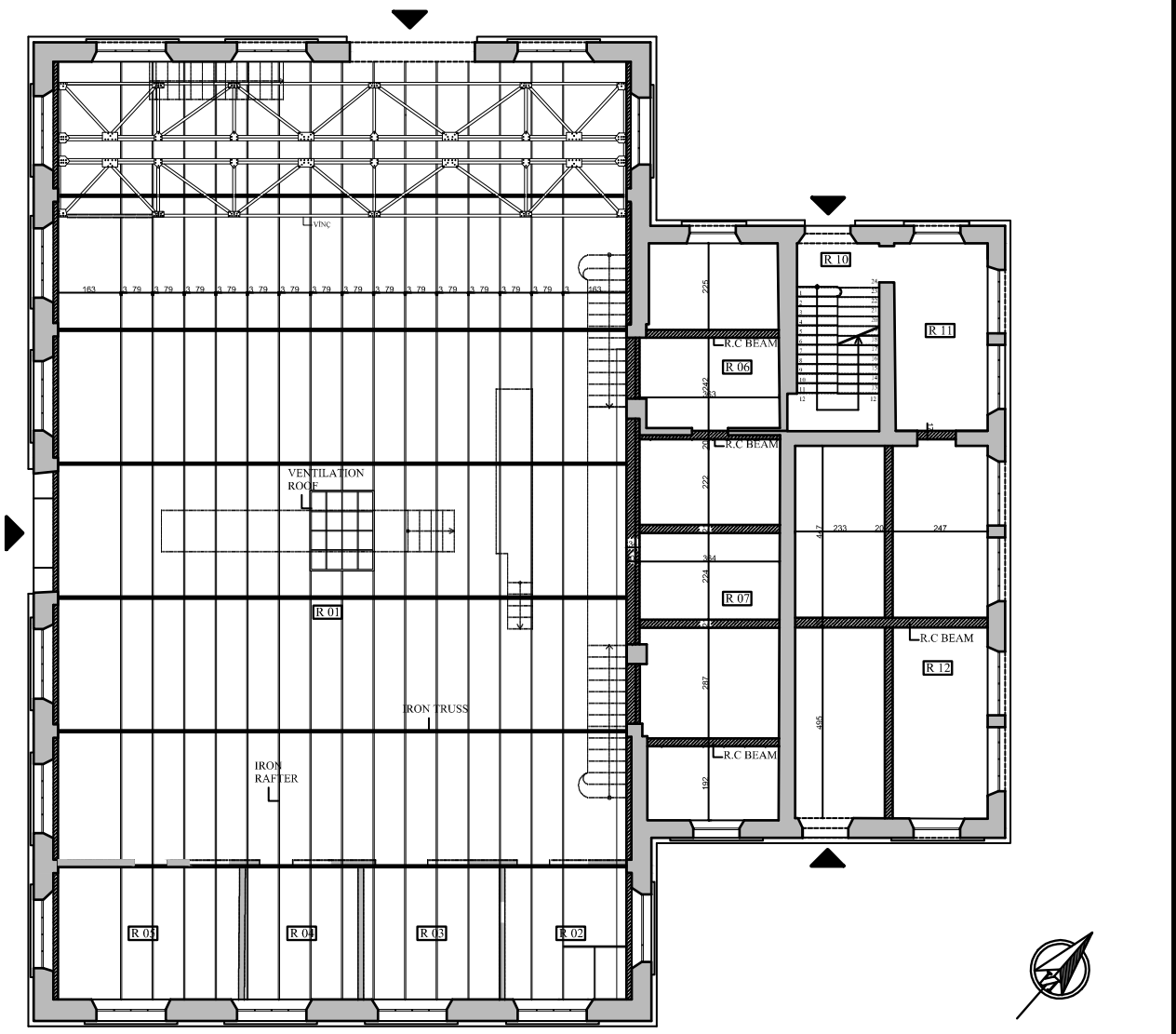
LEGEND

CONCRETE



SHEET NAME:	BASEMENT FLOOR PAVEMENT PLAN
SHEET NUMBER:	**16**

Drawing 4.1.17



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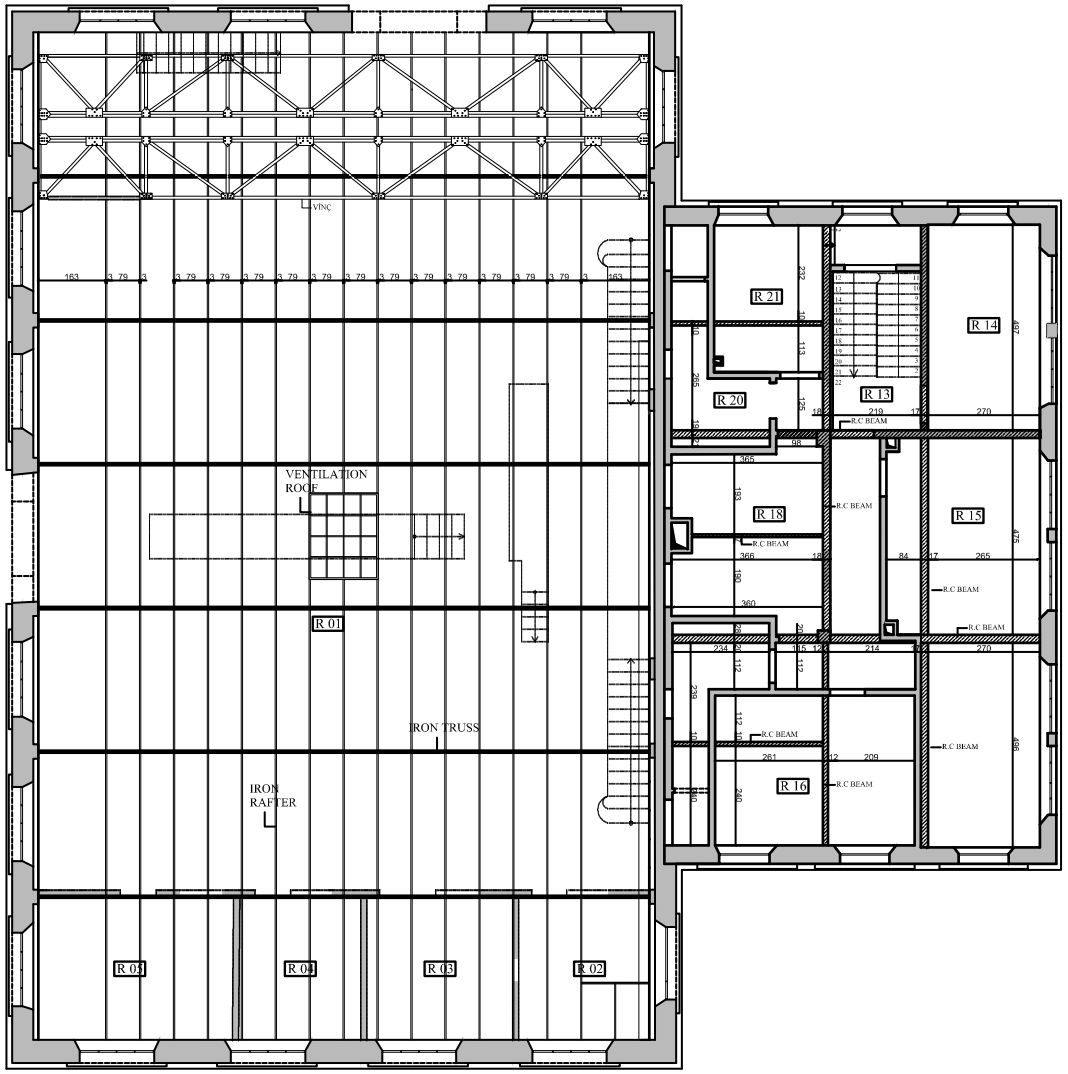
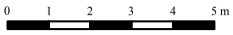
SURVEY

LEGEND

REINFORCED-CONCRETE BEAM

SHEET NAME:	GROUND FLOOR CEILING PLAN
SHEET NUMBER:	**17**





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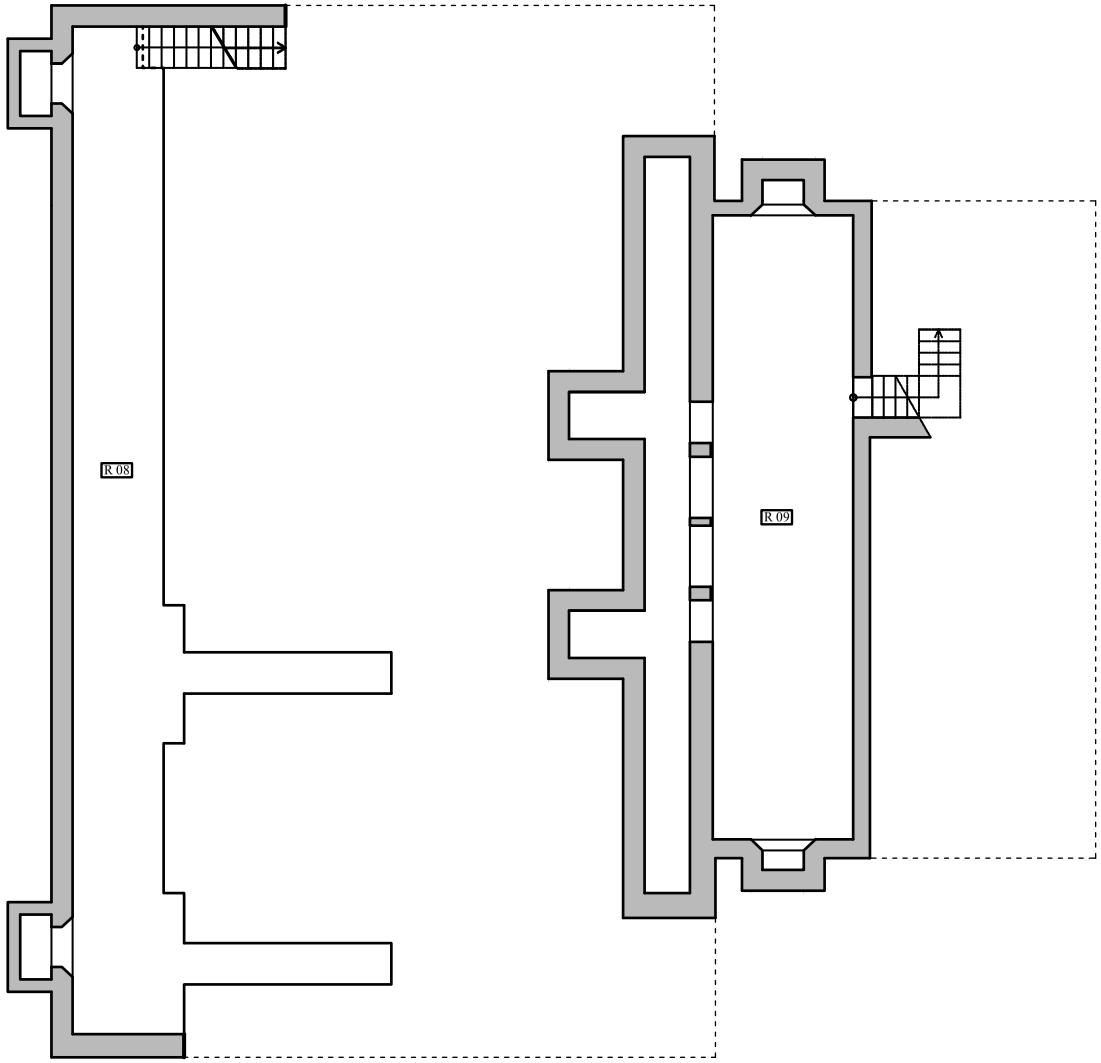
SURVEY

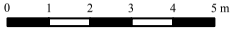
LEGEND

REINFORCED-CONCRETE BEAM

SHEET NAME:	FIRST FLOOR CEILING PLAN
SHEET NUMBER:	**18**

Drawing 4.1.19





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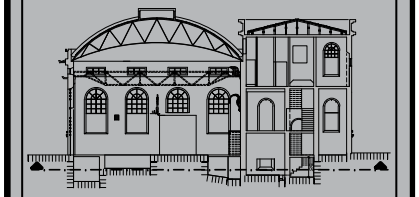
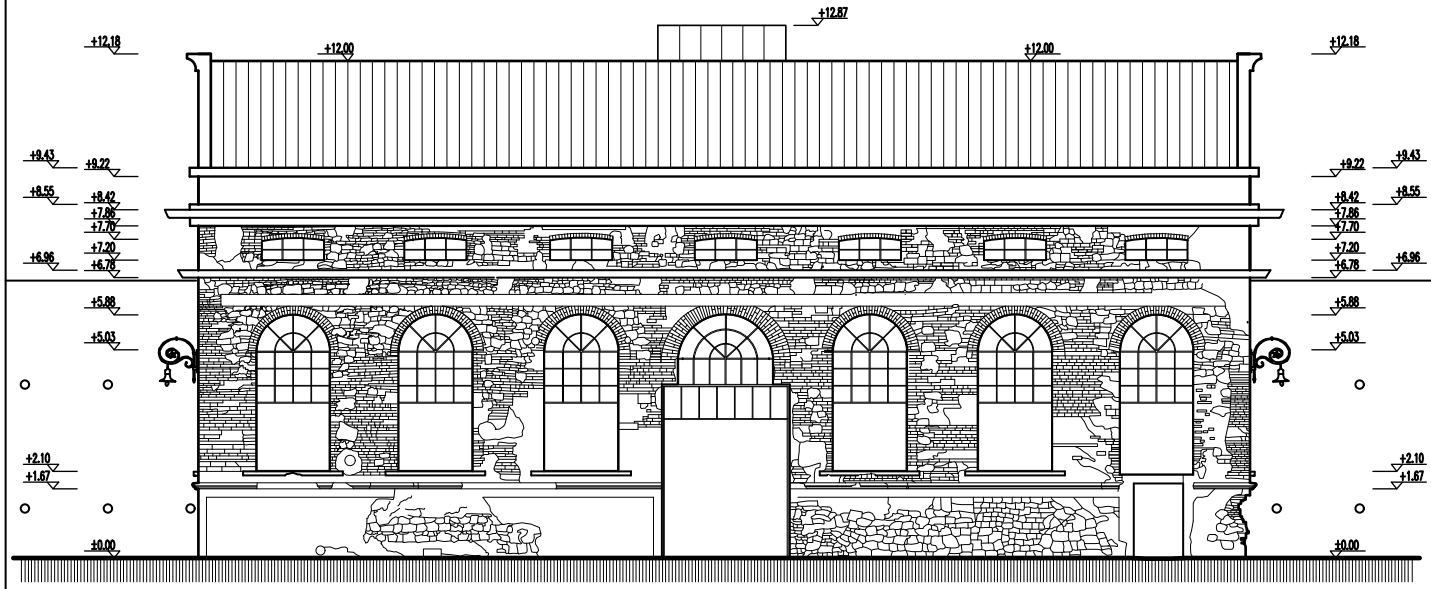
SURVEY



SHEET NAME:	BASEMENT FLOOR CEILING PLAN
SHEET NUMBER:	**19**

Drawing 4.1.20



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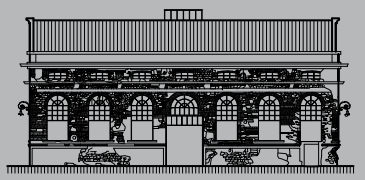
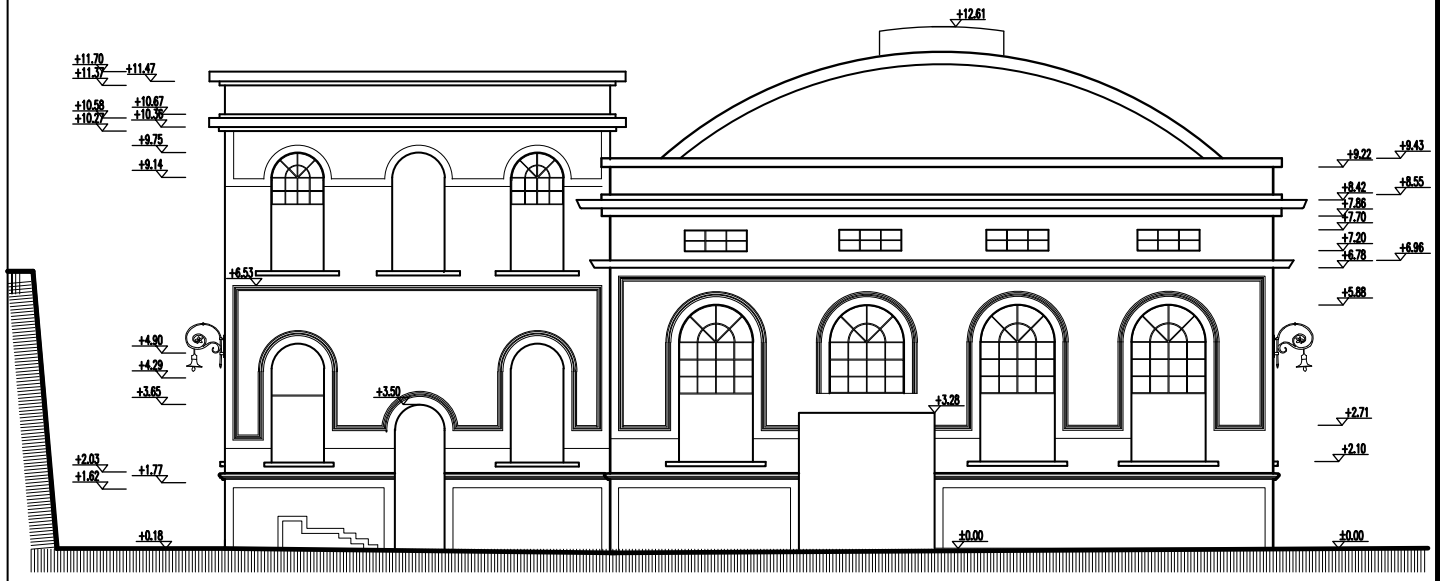
SURVEY



SHEET NAME:	SOUTH-WEST ELEVATION
SHEET NUMBER:	**20**

Drawing 4.1.21



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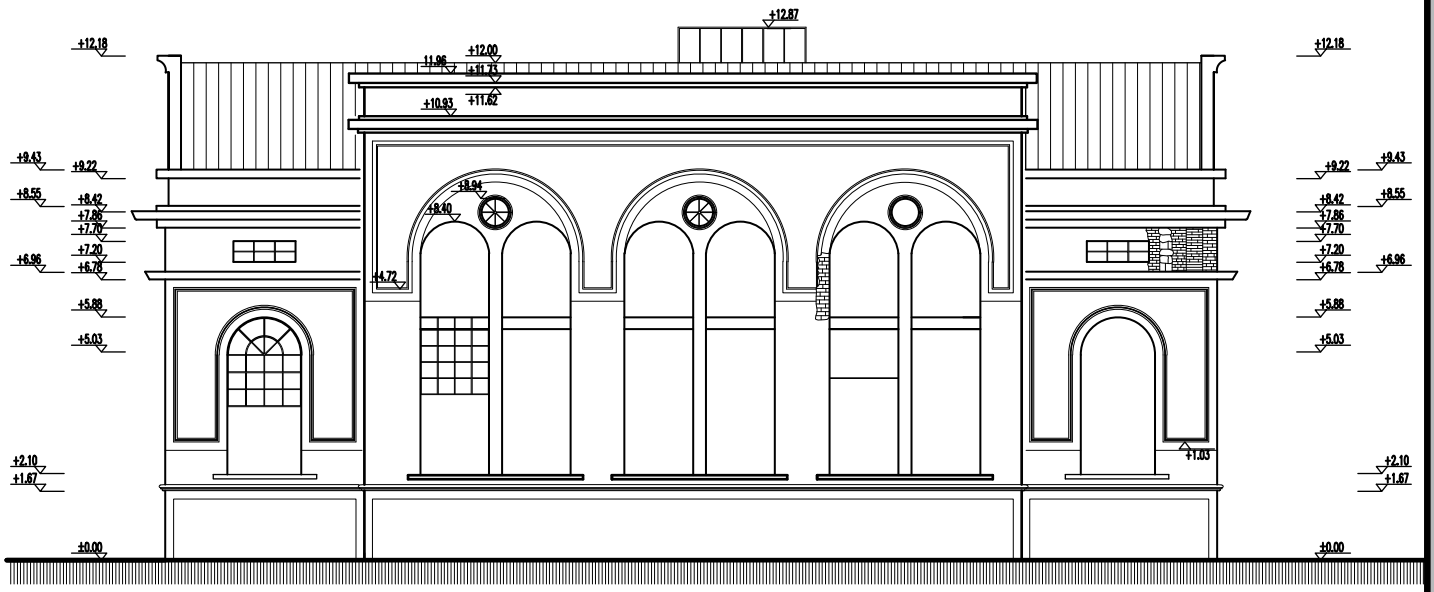
SURVEY

SHEET NAME:	NORTH-WEST ELEVATION
SHEET NUMBER:	**21**

Drawing 4.1.22



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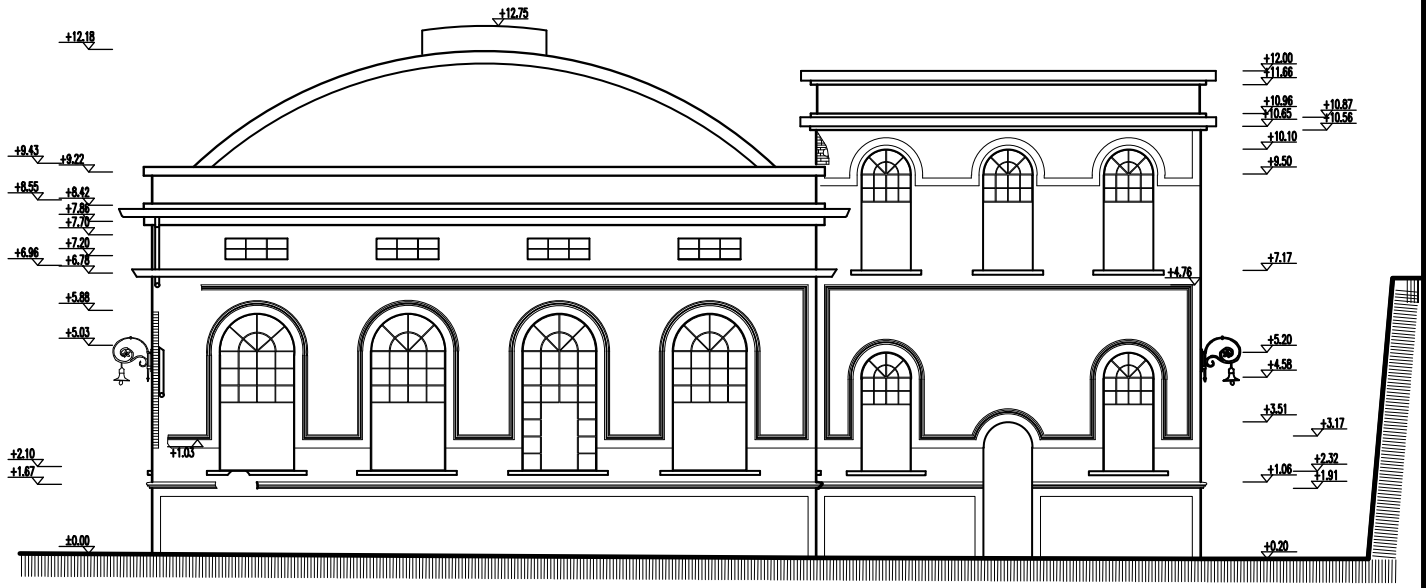
SURVEY

SHEET NAME:	NORTH-EAST ELEVATION
SHEET NUMBER:	**22**



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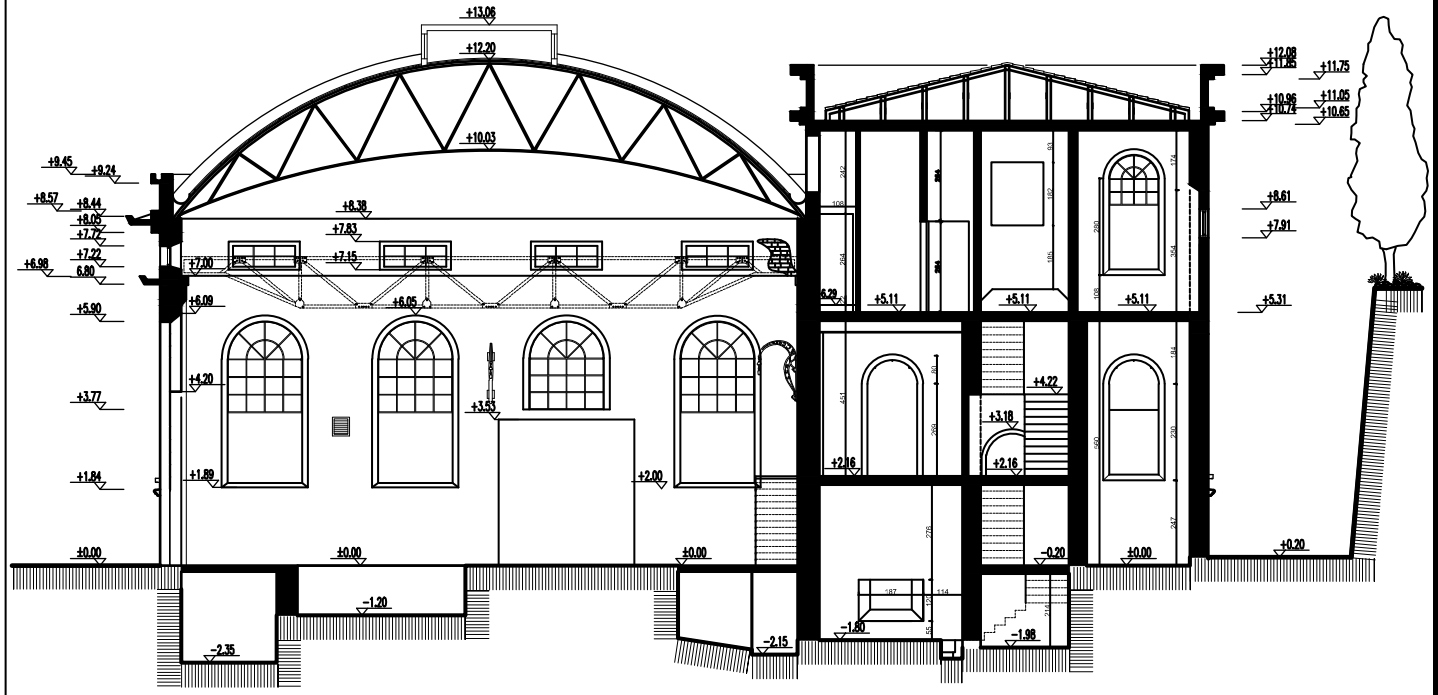
SURVEY

SHEET NAME:	SOUTH-EAST ELEVATION
SHEET NUMBER:	**23**



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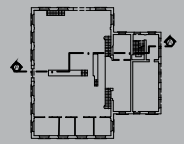
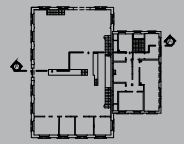
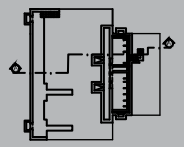
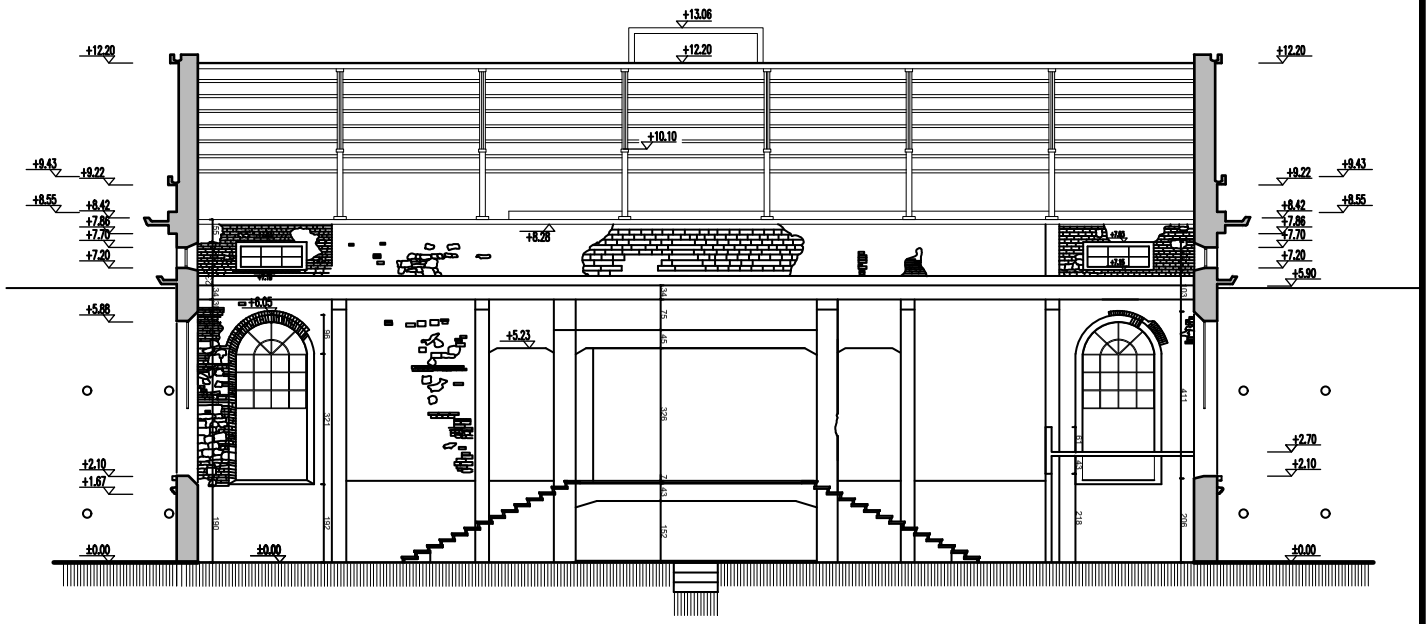

GROUND FLOOR


FIRST FLOOR


BASEMENT FLOOR

SHEET NAME:	SECTION A-A
SHEET NUMBER:	**24**

Drawing 4.1.25



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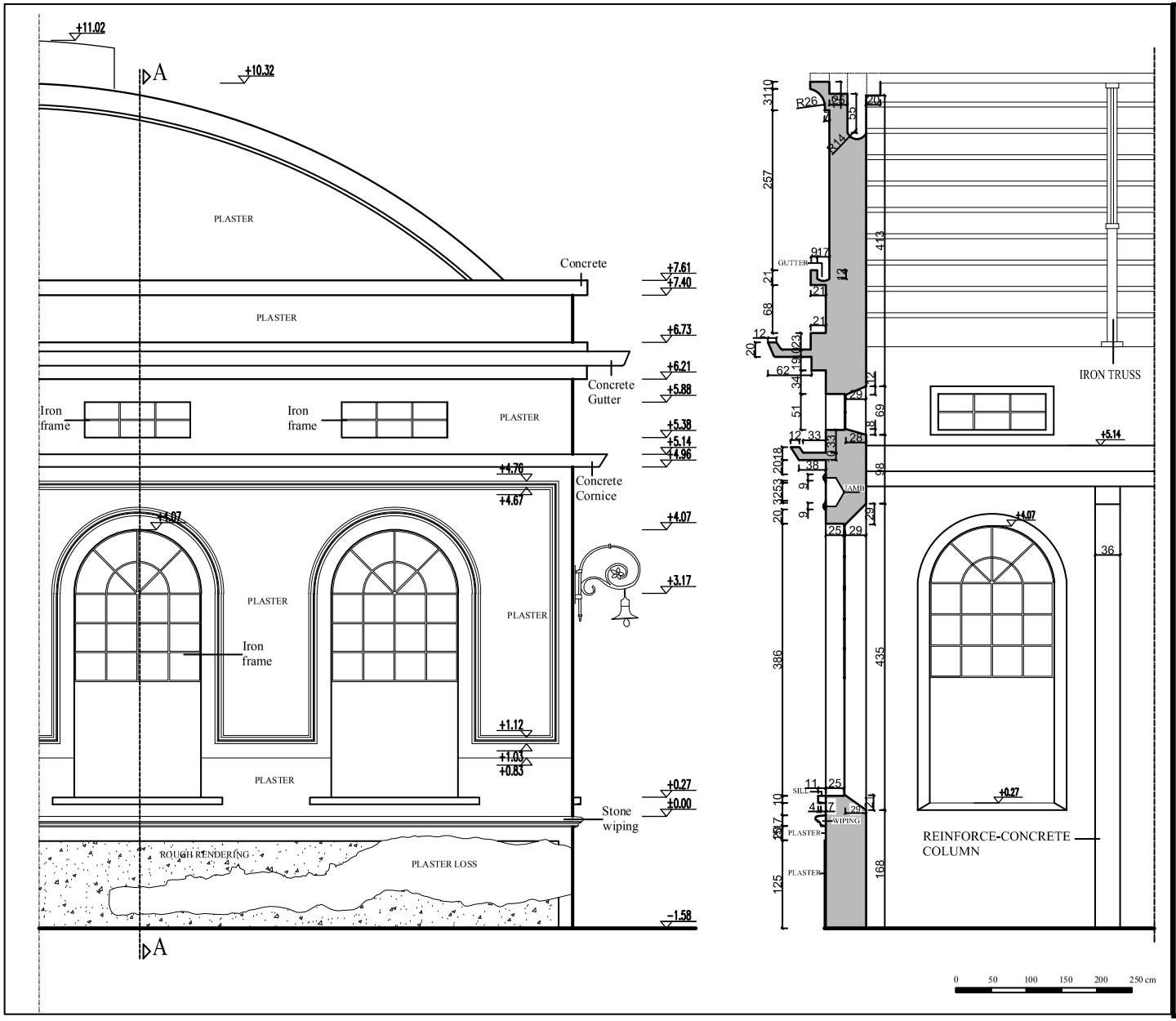
SURVEY

SHEET NAME:	SECTION B-B
SHEET NUMBER:	**25**



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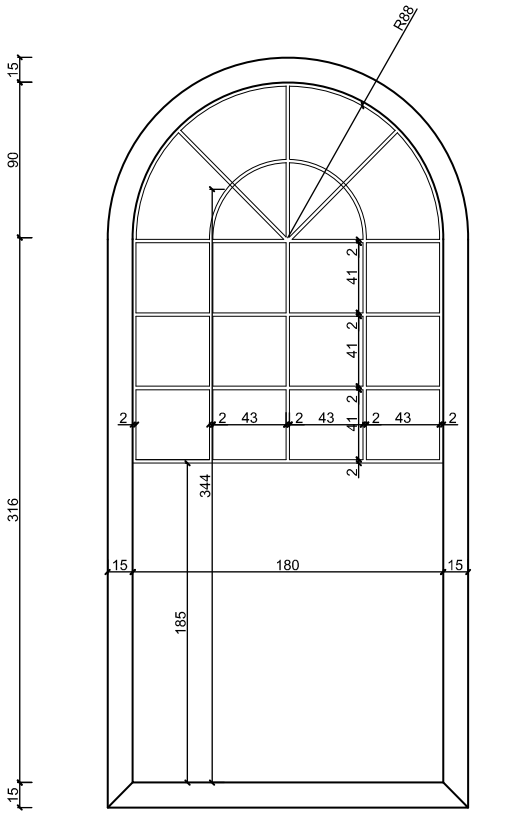
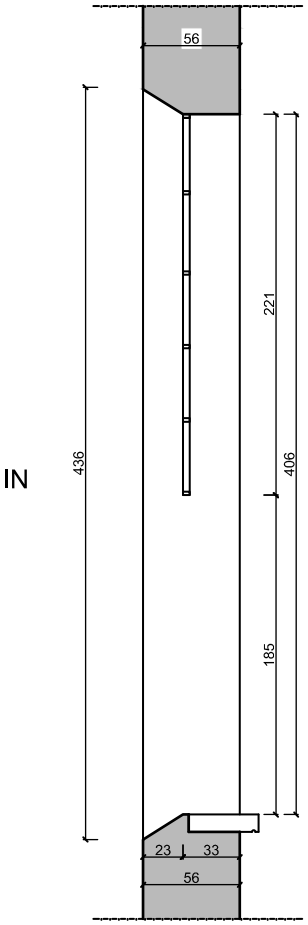
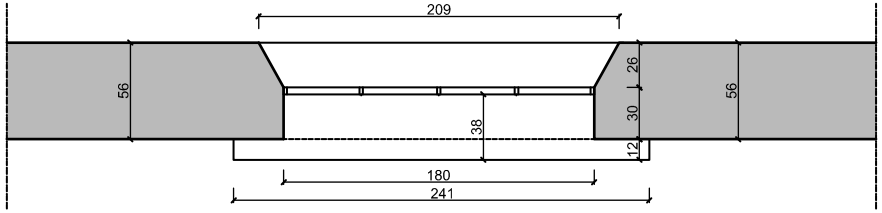
SURVEY

SHEET NAME:	DETAIL 1
SHEET NUMBER:	**26**







0 25 50 75 100 125 cm

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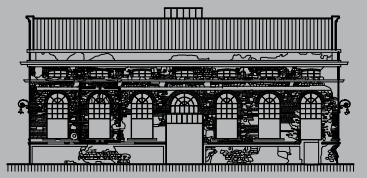


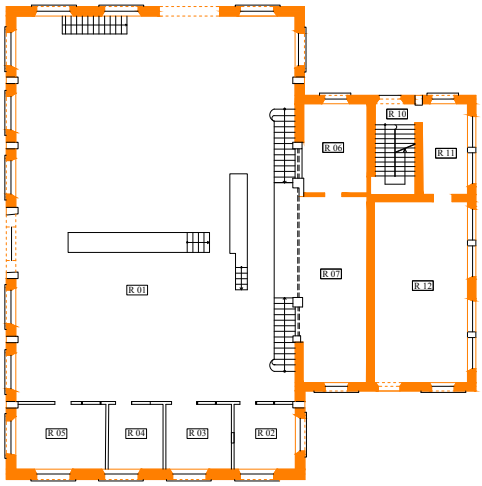
SHEET NAME:	DETAIL 2
SHEET NUMBER:	**27**

FULL BRICK MASONRY

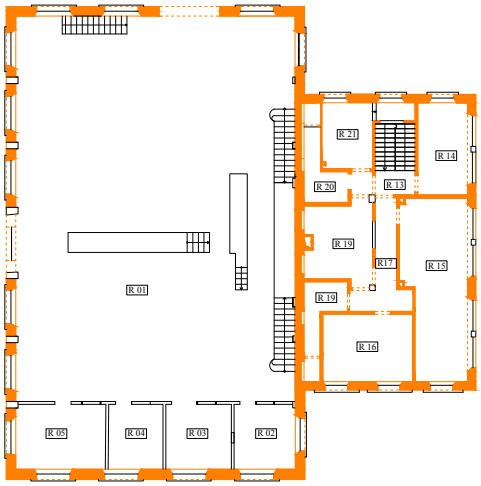
M01

LOCATION: The solid brick masonry structure is visible exterior walls, interior walls and arches in the building.

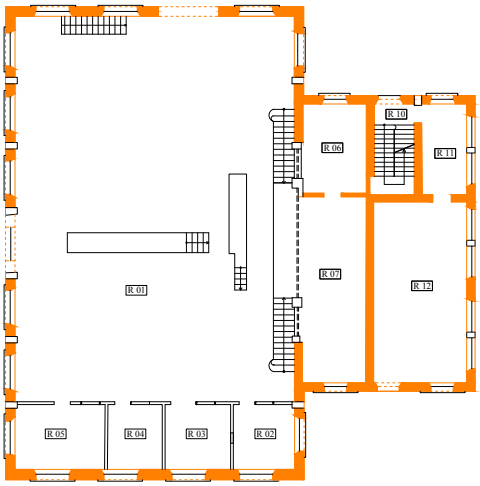
DESCRIPTION: The exterior wall is about 45-50 cm. and stone and solid brick masonry are used together The interior wall is about 10-20 cm. The solid brick of dimensions; stretcher is 23cm, header is 10cm and height is 5cm. The solid brick which is use for the exterior wall is bearing structure. The interior solid brick wall is used for partition wall. The arches are made of the solid bricks which is settled above the windows and doors.
The some part of layers are ranged regularly and the some part of layers are ranged randomly in the walls.



GROUND FLOOR



FIRST FLOOR



BASEMENT

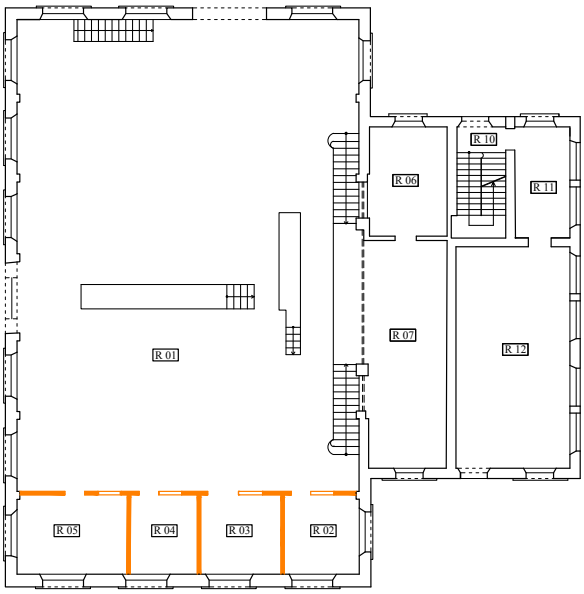
MATERIAL LIST

BRICK: THE HOLLOW BRICK

LOCATION: The room R02, R03, R04 and R05 are constructed with the hollow bricks.

DESCRIPTION: The hollow red brick wall was constructed later. It is a different type of brick. The four rooms were built with perforated brick. It is not a bearing wall. It was built for partition wall. The dimension of the hollow brick; stretcher is 29 cm, header is 19 cm and height is 13,5 cm.

The hollow bricks are lighter and easier to handle, and have thermal different properties than solid bricks.

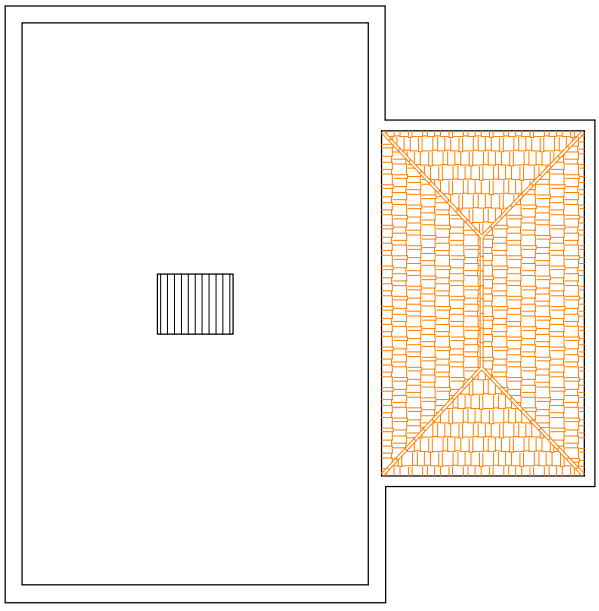


GROUND FLOOR

BRICK: THE ROOF TILE

LOCATION: The roof tiles are on the top of the building which is located to northwest direction is constructed by red brick roof tiles.

DESCRIPTION: The gable roof and the ridge are red tile brick. The tile starts from the ridge to finished gutter. It is Marseille type brick. The dimension of roof tile is 23 cm x 41 cm.



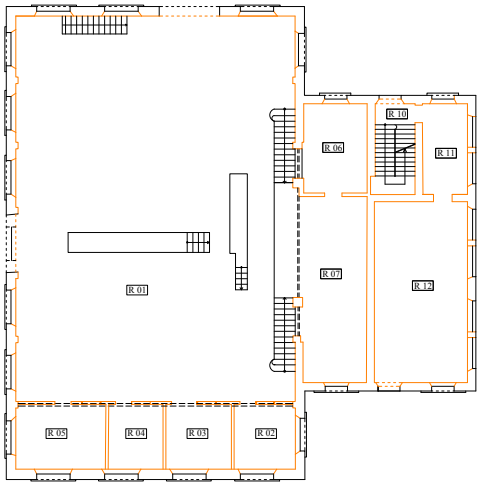
ROOF PLAN

PLASTER: MORTAR

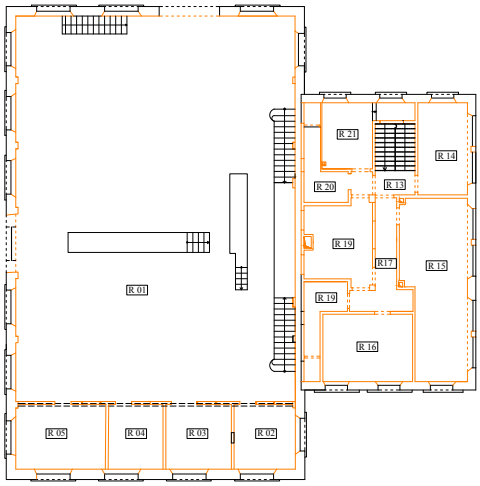
LOCATION: The mortar plaster is visible at the interior walls and the exterior walls of the building.

DESCRIPTION: The mortar plaster can made with three layers. The first layer is mortar base after the brick structure, second layer is bedding material and the third one is finishing materials as a paint. All the interior and exterior walls were used mortar plaster.

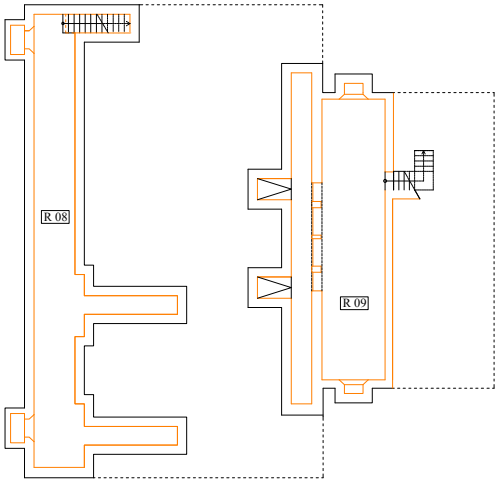
The frame of the windows of the facade were made with mortar.



GROUND FLOOR



FIRST FLOOR



BASEMENT

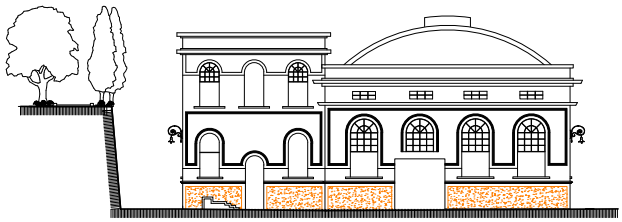
PLASTER: ROUGHCAST PLASTER

M05

LOCATION: The rough-cast plaster is at the base of building facade with a bordeaux colour.

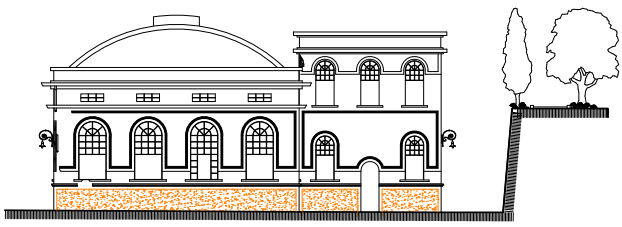
DESCRIPTION: The Rough-cast or pebbledash is a coarse plaster surface used on outside walls that consists of lime and sometimes cement mixed with sand, small gravel, and often pebbles or shells. The materials are mixed into a slurry and are then thrown at the working surface with a trowel or scoop.

MATERIAL LIST

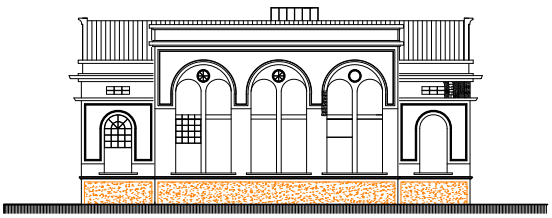


NORTHWEST ELEVATION

SOUTHWEST ELEVATION



SOUTHEAST ELEVATION



NORTHEAST ELEVATION

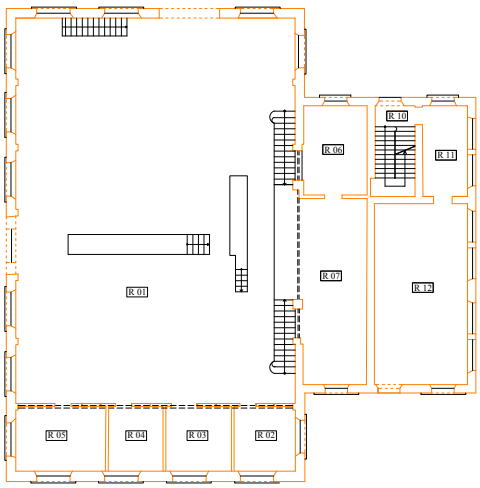
PAINT

M06

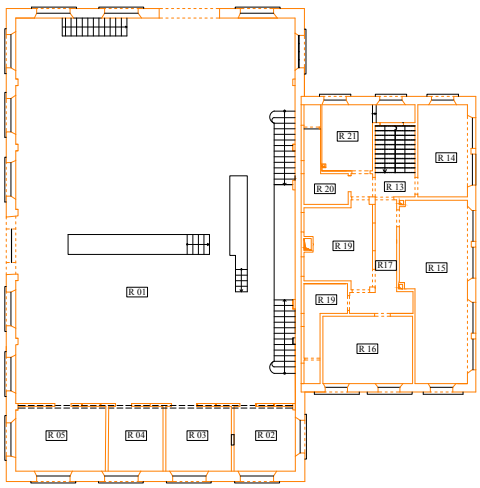
LOCATION: Paints are visible to the interior and exterior facade of the building with different colour.

DESCRIPTION: Interior and exterior original colour of the building is yellow. However, some part is paint white, blue, green and grey. Generally, bellow the window was paint with grey colour.

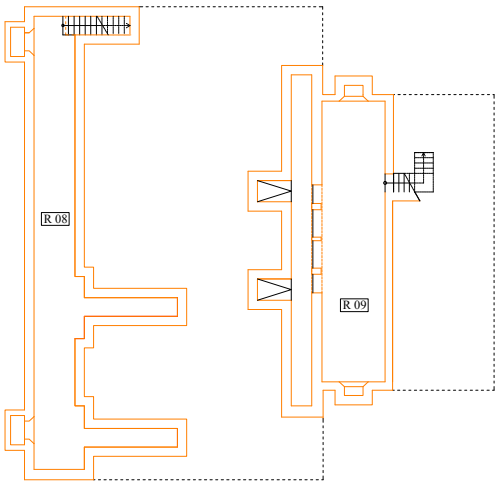
The roughtcast plaster ,which is located exterior facade, is paint bordeaux.



GROUND FLOOR



FIRST FLOOR



BASEMENT

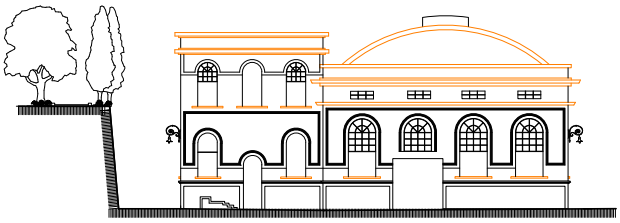
MATERIAL LIST

THE CONCRETE

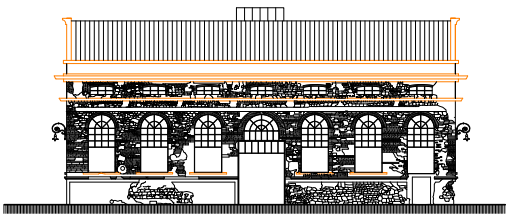
LOCATION: The sills and eaves are constructed with concrete in the building.

DESCRIPTION: Concrete was used for gutter, eaves and silling in the building. It is cast in-situ concrete.

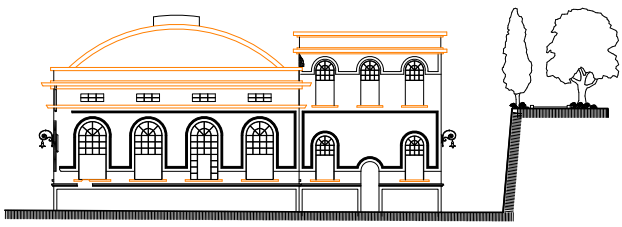
Concrete is made up of four main ingredients: coarse aggregate (gravel, usually between 0.5 to 1.5 inch in diameter), fine aggregate (sand, usually between 0.005 and 0.25 inch in diameter), Portland cement, and water.



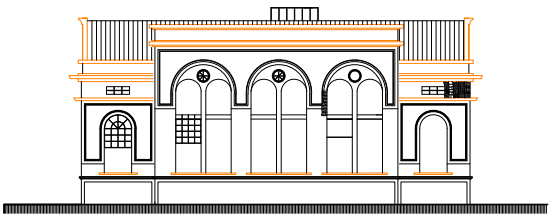
NORTHWEST ELEVATION



SOUTHWEST ELEVATION



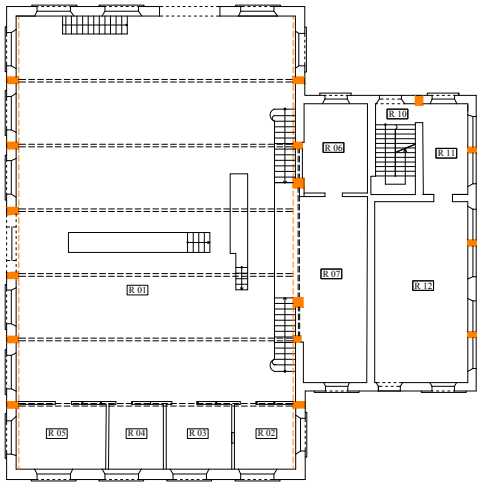
SOUTHEAST ELEVATION



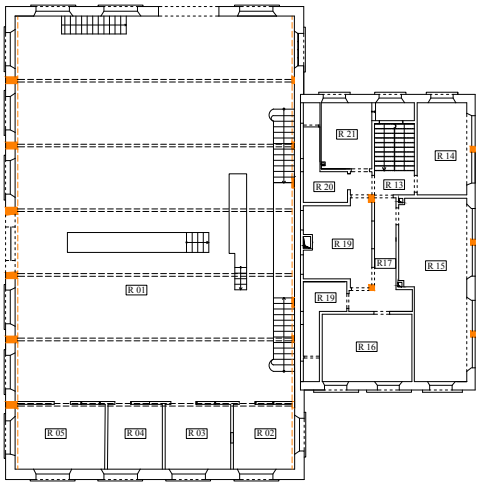
NORTHEAST ELEVATION

LOCATION: All the columns, beams, slabs and staircases are reinforced-concrete in the buildings.

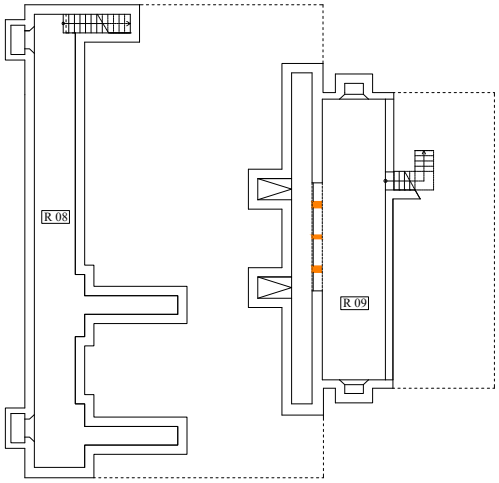
DESCRIPTION: Reinforced-concrete ,which was made with columns, beams, slabs and staircases. They are cast in-situ in the building. However, The beams that is carry to winch is pre-cast concrete. These beams are settled cantilever column.



GROUND FLOOR



FIRST FLOOR

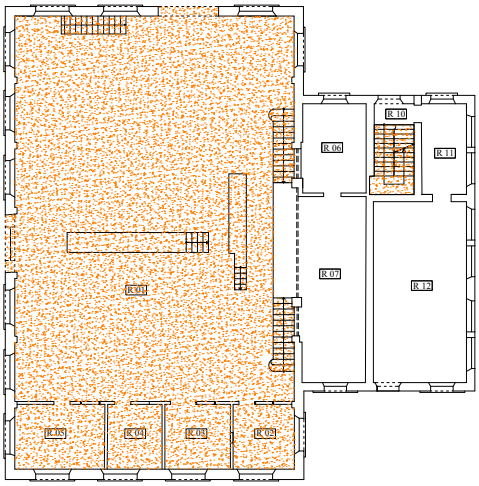


BASEMENT

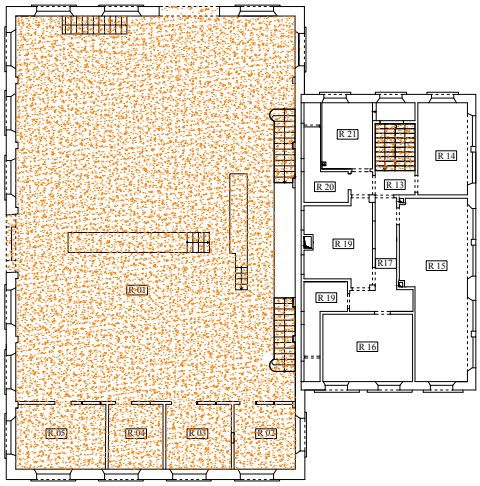
TILE: CONCRETE TILE

LOCATION: The concrete tile is visible at the rooms tiled R01, R02, R03, R04, R05, R08, R09.

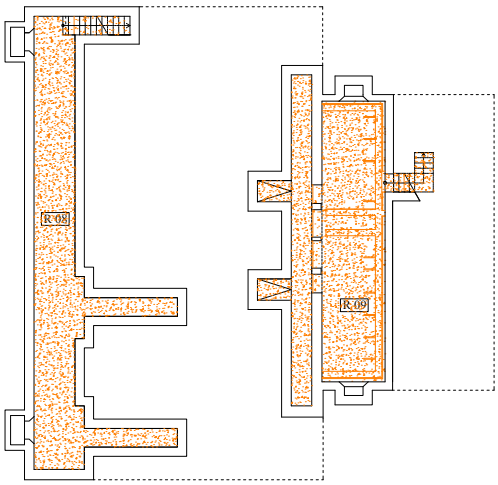
DESCRIPTION: In Atelier Building's pavement and basement floors' pavements are concrete. Concrete pavement can have a long service life and strong surface so it is suitable for factory buildings.



GROUND FLOOR



FIRST FLOOR



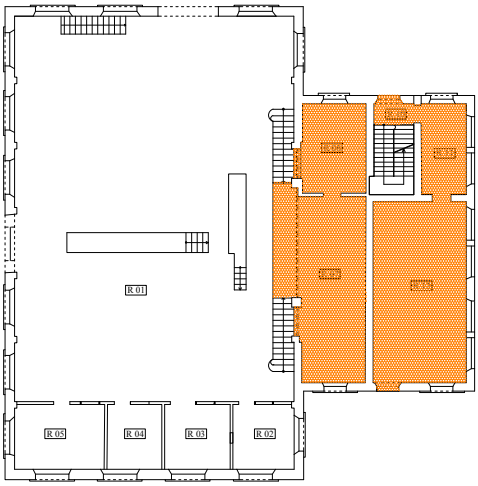
BASEMENT

TILE: HEXAGON BRICK TILE

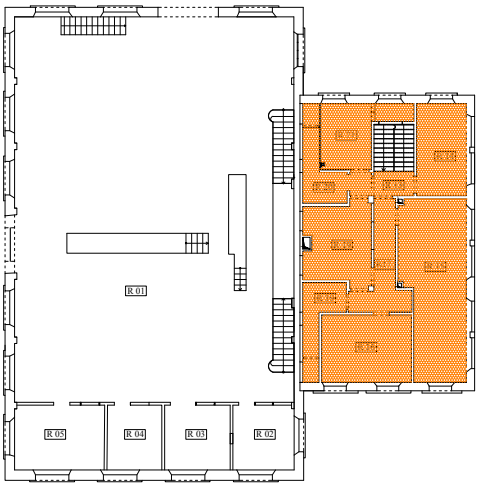
M10

LOCATION: The hexagon brick tile is visibled at the rooms tiled R06, R07, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21.

DESCRIPTION: The pavement of Administration Building, R06 and R07 rooms are hexagon brick tiles. The dimension of hexagon tile is 12 cm x12 cm. Hexagon brick tile is typically Ottoman style .



GROUND FLOOR

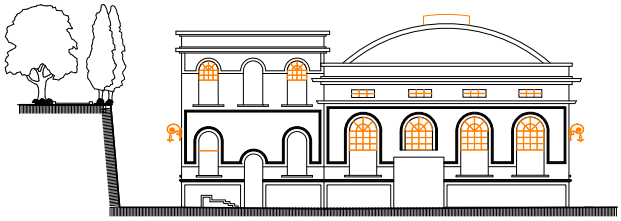


FIRST FLOOR

IRON

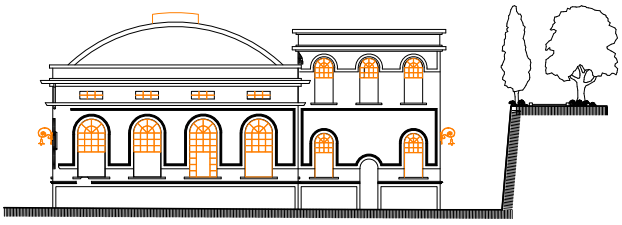
LOCATION: The irons are visibled at the windows, exterior doors, the building roof and its trusses.

DESCRIPTION: Iron is a durable and strong material for Power Plant. Thus, iron was used for different functions. For instance; The truss and winch are iron and the thin iron vault roof is covered. Exterior iron frames are iron also the interior and exterior lightings are iron materials.

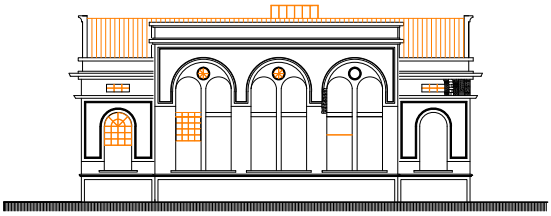


NORTHWEST ELEVATION

SOUTHWEST ELEVATION



SOUTHEAST ELEVATION



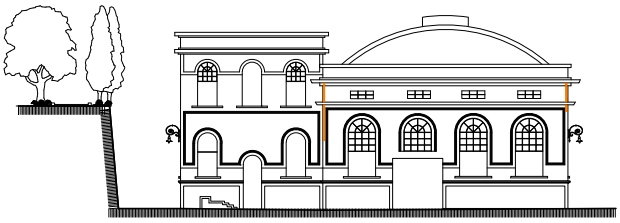
NORTHEAST ELEVATION

GALVANIZED IRON

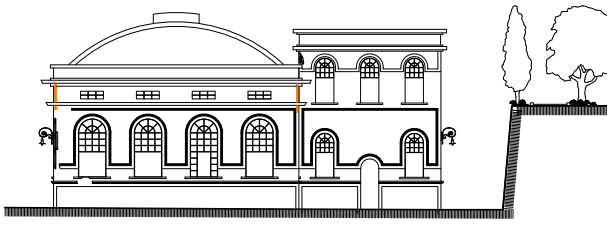
LOCATION: All the rain pipes are made with galvanized iron.

DESCRIPTION: All the rain pipes were made with galvanized. The original rain pipes were constructed inside the building. After that, the rain pipe was constructed outside of the wall.

Galvanized iron is iron which has been coated in a layer of zinc to help the metal resist corrosion. When metal is going to be used in an environment where corrosion is likely, it is often galvanized so that it will be able to withstand the conditions.



NORTHWEST ELEVATION



SOUTHEAST ELEVATION

MARBLE

LOCATION: The marble sink is visibled in the room R20.

DESCRIPTION: The sink which is located in bathroom was constructed with marble.

FIRST FLOOR PLAN

4.2. Description of the Building

4.2.1. General Description of the Site

4.2.1.1. Outside Space

The access to the garden is only possible through the garden gate at the southeast of the lot. The gate opening width is 8.70 meter and the height of the garden wall is 2.25 meter. The garden concrete wall is up to 1.10 meter from the ground. After 110 cm fence is covered with concrete, the 90 cm iron fence has been settled on the concrete wall. *(see Picture 4.1)*

In the garden, the Power Plant is located at the northeast of the lot. A water reservoir constructed in concrete is located at the southeast of the lot. Next to the water reservoir, there is a small pool. Originally, water was obtained from this pool, and stored in the reservoir. *(see Picture 4.2)*

Picture 4.1

Picture 4.2 Pool

At the east and at the southeast land of the lot, there is some grass. The rest of the lot is soil. Trees are mostly located at the northeast, east and southeast part of the lot. There are different sorts of trees; spruces, pines and poplars.

Until April 2013, The building and its surrounding were not protected; the garden door did not exist, a lot of rubbish were visible in the garden and drunkard could enter the building. In April 2013, the gate door was constructed by Edirne Governorship. In addition, the garden was cleaned and some trees were cut especially, near the building. Thus, it started to be protected.

According to the Edirne Protection District Board, the garden of the Power Plant and the surrounding area are registered as the Tatarhaniler Cemetery. Some tombstones which have been excavated in the garden are still visible next to the Power Plant. *(see Picture 4.3)*

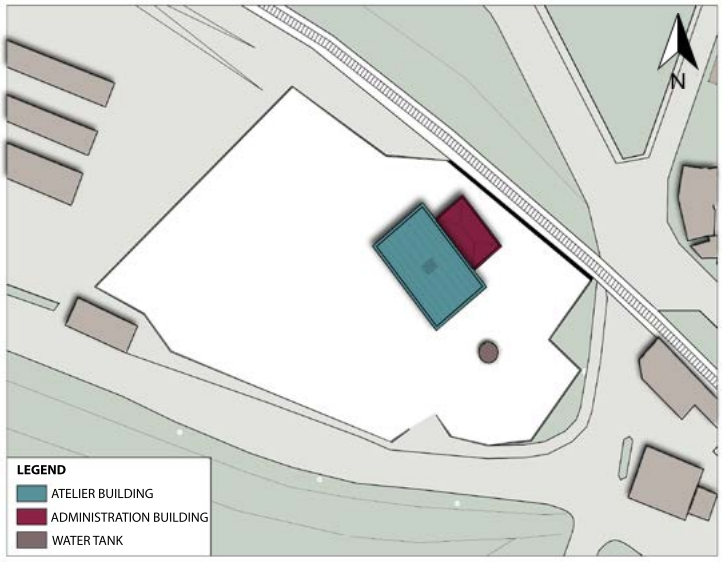
In 2006, a landscaping project was made by the Governor. The single-storey buildings were removed, and the garden enclosure was constructed, but the project has not been completed.

Picture 4.3

4.2.1.2. Structure

The Power Plant in Edirne is an industrial structure whose is 'T' rectangular plan consists of two buildings. It is located at the north-eastward of the lot.

The Plant is divided into an Atelier Building of 415 m^2 (16 x 25,5 m) and an Administration Building of 72 m^2 . The Administration Building aisle is 9,5 x 16 m. and has two-stories and a basement floor. The Atelier Building has one-storey and a basement floor. *(see Map 4.1)*



Map 4.1

4.2.2. Facades

This part approaches to the existing building's position and materials of the north-east elevation, the north-west elevation, the south-east elevation and the south-west elevation.

4.2.2.1. South-west Facade

The front facade of the Atelier Building looks toward the Tunca River. The facade is a rectangular of 25 x 12 meter nearly a double square. The facade has been designed according to a mirroring symmetry with respect to a central axis. The main door is on the central axis. The main door was enlarged after. It is now 3 meters wide, 4.2 meters high. There is an arched window at the top of the entrance door. At the right side of the facade, there is an another door which was opened after the construction of the building. The two wings of the doors have disappeared.

In the facade, there are six rounded arch windows (180 x 380 cm): three on each side of the central door. Above the arched windows there are rectangular windows (150 x 50 cm) above the rectangular windows, the another eaves returns throughout the building. The roof is vaulted. The ventilation on the roof is in the central axis. *(see Picture 4.4)*

Materials: Concrete, full brick masonry, iron, plaster and paint.

Picture 4.4

4.2.2.2. North-west Facade

The north-west facade looks toward the Ulus Bazaar. Both the Atelier and the Administration Buildings are this facade. The facade is rectangular and 25 meter length. The Atelier Building is 16x12 meter and one floor. The Administration building is 9x11.5 meter and has two floors. The administration building facade's has been designed according to a mirroring symmetry.

In the Administration Building, the main rounded arch door is on the central axis. Five rounded arch windows are on the Administration facade two at the ground floor, three at the first floor. The roof is gable roof which is settled on the roof parapet.

In the Atelier Building, the side rectangular door which has been opened later is located on this facade. Four rounded arch windows (180 x 380 cm) are on the Atelier Building facade. One is at the top of the rectangular door. The vault roof settled on the roof parapet, which is on the surrounding eaves above of rectangular form of the window. All the windows of the facades are surrounded by frame.

Materials: Concrete, full brick masonry, iron, plaster and paint.

Picture 4.5

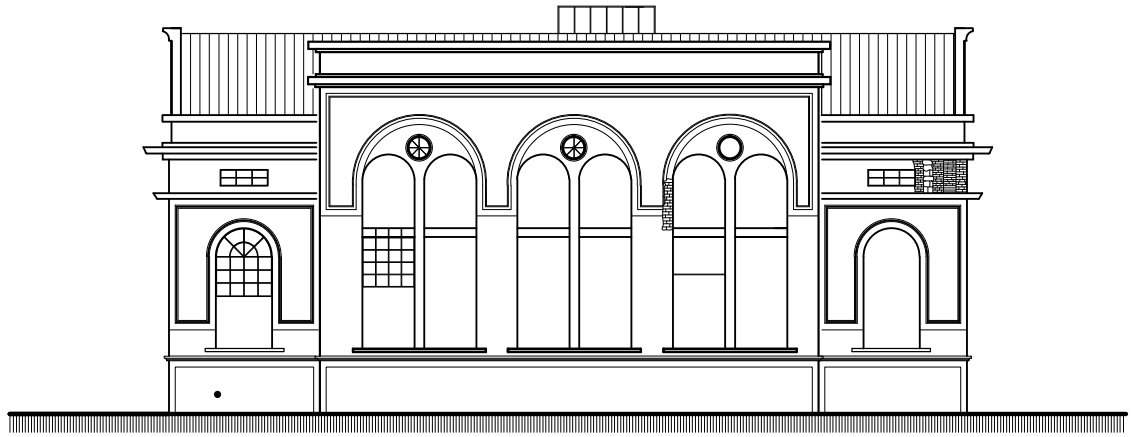
4.2.2.3. North-east Facade

The north-east facade looks toward the retaining wall above which the railway is located. It is the rear facade of the building. The facade has been designed according to a mirroring symmetry. The central part of the facade is the Administration Building and the Atelier Building shows behind, in the right and left sides of the facade. The total facade length is 25 meter.

The facade of the Administration Building is a rectangle of 15.8 x 11.5 meters. It has six rounded-arch windows, 7 meters high which cover two floors. These windows are divided into three groups, each groups have two rounded-arch windows and a 70 cm diameter rounded window is located in between the two rounded-arch windows. The frame surrounds these groups.

The Atelier Building facade has two rounded-arch windows and two rectangular windows on the each side of the facade. The roof is barrel vault. *(see Drawing 4.1 and Picture 4.6)* Water out pipe appears on the right side of the facade. *(see Picture 4.7)*

Materials: Concrete, full brick masonry, steel, plaster and paint.



Drawing 4.1

Picture 4.6

Picture 4.7 Water Out Pipe

4.2.2.4. South-east Facade

This facade is similar to the facade of the northwest. The Administration building is at the right side, the Atelier building is at the left side of the facade. The facade length is 25 meter length. The Administration building and Atelier building have been designed according to a mirroring symmetry.

In the Administration Building, the main rounded arch door (118 x 350 cm) is on the central axis and it has five rounded-arch windows (175 x 387 cm) at total: two on the ground floor, three at the first floor.

The Atelier Building, as the other facades, has four rounded-arch windows (180 x 380 cm) and above the cornice rounded-arch windows after the has rectangular windows (150 x 50 cm) and above the rectangular window the eaves returns throughout the building. This eaves are used as gutter. Above the eaves, there is the vaulted roof. Both Atelier and Administration Buildings' arched windows are surrounded by frame. (see Picture 4.8)

Materials: Concrete, full brick masonry, iron, plaster and paint.

Picture 4.8

4.2.3. Interior Description

Plan Features

In this section, the Atelier and Administration Buildings' basement floor, ground floor and first floor's plan features, structural elements (staircases, windows, doors, .. etc.) and the spaces are examined respectively.

4.2.3.1. Atelier Building Plan Features

The Atelier Building is settled on the southwest of the field area. It consists of a ground floor, a basement floor and a mezzanine.

Ground Floor

The Atelier building can be entered directly from the garden. It was built as a single big volume has been designed symmetrically and covered by vault. R01 (entrance) room is 309 m^2 and rec-

tangular shaped. In 1987, four rooms (R02, R03, R04 and R05 rooms) were constructed and 'also two holes were opened on the floors of R01 for the maintenance of the vehicles'. (Akgün, 2013). *(see Picture 4.2.17)* The total sitting area in the ground floor is 364 m^2. The interior and exterior walls are solid brick walls. The exterior wall thickness is around 50 cm and inner walls are around 15 cm.

On the ground floor of the Atelier Building, there are three exterior doors. One is the main entrance door. There are fifteen wide arched windows which measure 180/400 cm. Two of them are above the doors (170/230 cm).

A couple of stairs connect the floor of rooms R06 and R07 with the administration building. *(see Picture 4.2.16)*

Materials: The walls are full brick masonry and stone masonry. The roof is an iron structure. R01, R02, R03, R04, R05 rooms' floors are concrete and were made by hollow brick masonry. R06, R07 rooms' floors are red hexagonal ceramic. All the columns and beams were constructed with reinforced-concrete structure.

Basement Floor

The basement floor can been reached by twelve steps (S02) with concrete staircase from the ground floor. Only the R08 room is on the basement floor.(the measurements can not be taken exactly because of the rubbish.) The surface of basement floor is presumed about 48 m^2. There is no ventilation in the basement. The ceiling height is 1.90 meters.

Materials: The ceilings and floors are concrete.

4.2.3.2. Administration Building Plan Features

The Administration building is on the northeast side of the Atelier. It consists of a ground floor, first floor and a basement floor. This building was constructed for administration.

Basement Floor

There is only one room in the basement floor. This floor is located under the part of the Atelier Building which is entered by 'L' shaped staircase (S03) with twelve steps from the Administration Building. *(see Picture 4.2.40)* In the Atelier Building, under the staircase (S01) there is an opening which leads to the basement floor of Administration Building. (The R01 area is seen from the R09).

The room is symmetrical. The total area is 83 m^2. The ceiling height is 3.80 meters. Two of the same sized (155/100 cm) rectangular windows are at the left and right side of the room. In the basement floor, three short columns (33/50 cm) are visible at the same size. *(see Picture 4.2.36)* At the back of the columns (110 cm width, 1723 cm length) there is a space as a canal. *(see from Picture 4.2.37 to 4.2.39)* Electricity was distributed from these canals. The electrical cables passed thought the earth and were distributed to the city.

Materials: The floor is concrete and there are several holes for electrical cables on the floor.

The walls are covered with solid brick and plaster. The ceiling is covered with plaster.

Ground Floor

The Administration building where the main entrance door exists has R10, R11, R12 rooms. Total area of ground floor is 72 m^2. The ceiling height is 5.90 meters. The exterior wall thickness is 40 cm and interior wall thickness is 15 cm. The concrete double-armed staircase (S04) is in R10 room, connects the ground floor to the first floor.

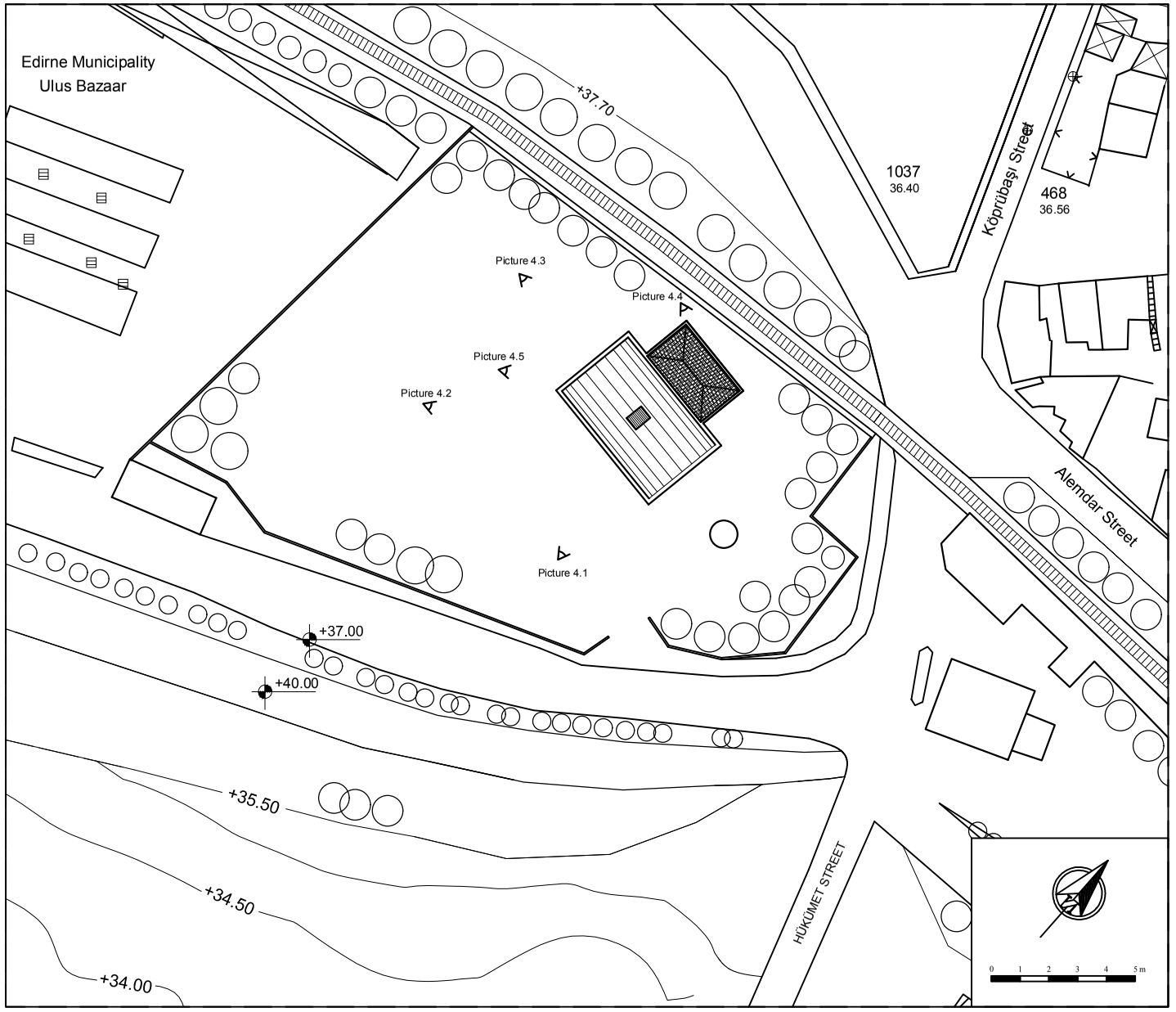
There are two arched entrance doors. One is main entrance door (120/350 cm) in R11 room. The other one is rear door (120/350 cm) in R12. Six rectangular form windows (116/350 cm) ,which continues to the first floor, are in room R11 and R12. Two arched windows (120/287 cm) are in the ground floor. *(see from Picture 4.2.44 to 4.2.52)*

Materials: The floor is red hexagonal ceramic. The ceiling is covered with plaster. Interior and exterior walls are solid brick and is covered with plaster and blue paint.

First Floor

The first floor is in + 5.11 level difference. There are nine rooms at total on the first floor. These are; R14, R15, R16, R18, R21 numbered rooms, R19 and R20 rooms are toilets, R13 and R17 numbered
rooms are service corridor. The right and left corners of this floor have toilets and toilets are entered from the service way. The total area of this floor is 136 m^2. The ceiling height is 440 cm. All the floor of first floor is red hexagonal ceramic. Some rooms have chimneys: R15, R18 and R21.(see Picture 4.2.70)
The R18, R19 and R20 rooms have two rectangular windows which are located at the top of the walls. The R18 room has three doors and one interior window which looks to the service hall (R17). The R14 and R15 have arched-windows. This type of arched-windows are located at the ground floor and a rounded window is settled in between the two arched windows. *(see Picture 4.2.62)* R21 room has a mezzanine which is ascended by two-steps. *(see Picture 4.2.78)* There are two windows in this space. One is arched exterior window, the other is interior rectangular form window which looks to the S05 staircase.
Materials: All ceilings of the spaces are covered with plaster. The walls are constructed with solid brick as an other floors. It is covered with plaster and blue paint. The beams and the columns are reinforced-concrete.

Drawing 4.1.28



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ARCHITECTURE FACULTY
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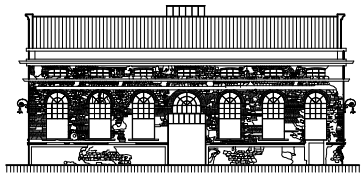
PROPOSAL OF CONSERVATION & RESTORATION OF EDİRNE POWER PLANT EDİRNE / TURKEY

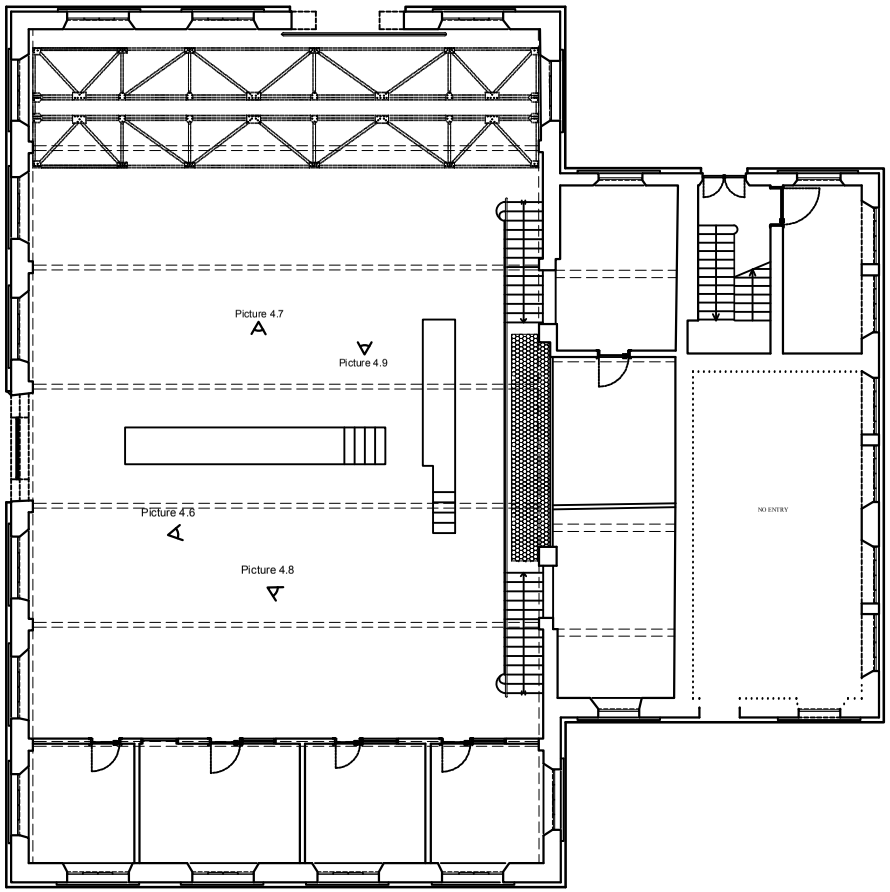
CONSULTANTS:
ASST. PROF. SYLVIE DUVERNOY
ASST. PROF. GIULIANA CARDANI
ASST. PROF. MEHMET ALPER

STUDENT:
ÖZGE NOYAN

PICTURE



SHEET NAME:	PICTURE
SHEET NUMBER:	**28**



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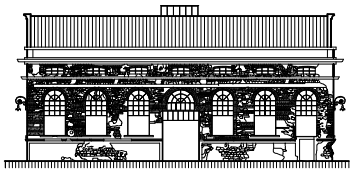


*Drawing by Tures Turism Planning & Restoration Office, İstanbul, Turkey, 2002

SHEET NAME:	PICTURE
SHEET NUMBER:	**29**

PHOTOS 2002*

Picture 4.2.1 South-west facade

Picture 4.2.2 South-west facade

Picture 4.2.3 North-west facade

Picture 4.2.4 North-east facade

Picture 4.2.5 North-west facade

Picture 4.2.6

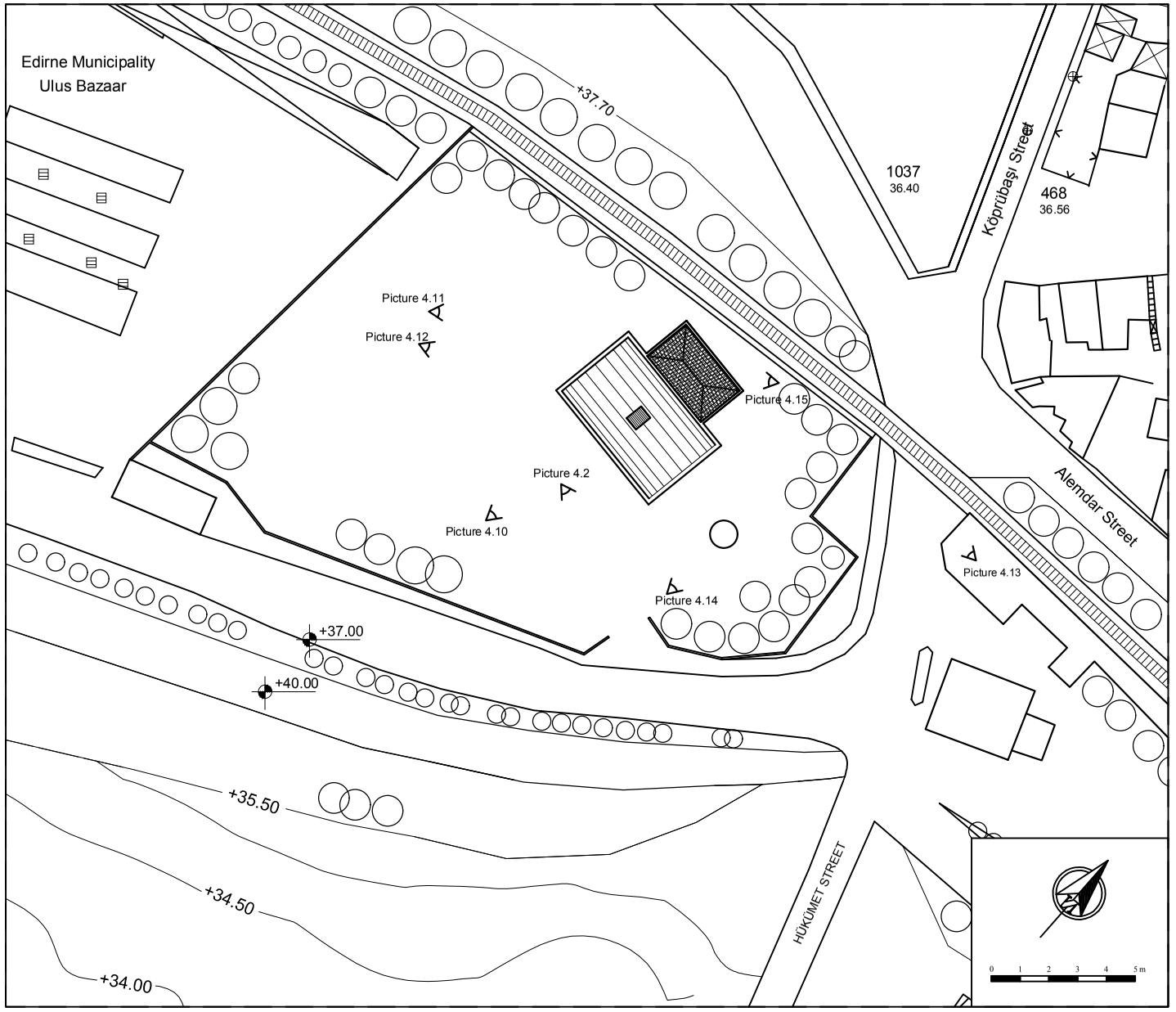
Picture 4.2.7

Picture 4.2.8

Picture 4.2.9

* *Photos by Tures Turism Planning & Restoration Office, İstanbul, Turkey, 2002*

Drawing 4.1.30



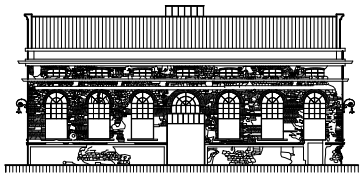
POLITECNICO DI MILANO
ARCHITECTURE FACULTY
MASTER OF ARCHITECTURE
LEONARDO CAMPUS

PROPOSAL OF CONSERVATION & RESTORATION OF EDİRNE POWER PLANT EDİRNE / TURKEY

CONSULTANTS:
ASST. PROF. SYLVIE DUVERNOY
ASST. PROF. GIULIANA CARDANI
ASST. PROF. MEHMET ALPER

STUDENT:
ÖZGE NOYAN

PICTURE



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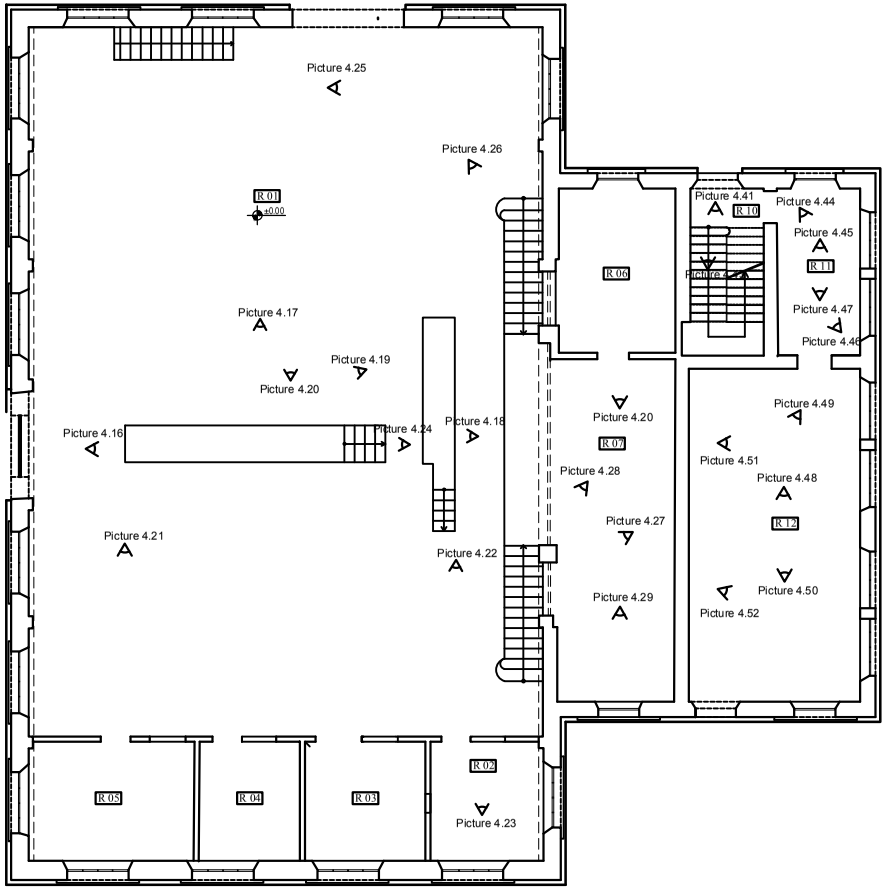
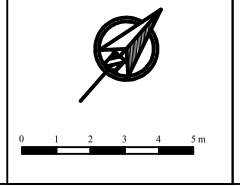
Drawing 4.1.31





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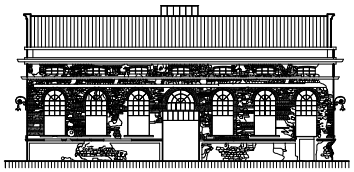

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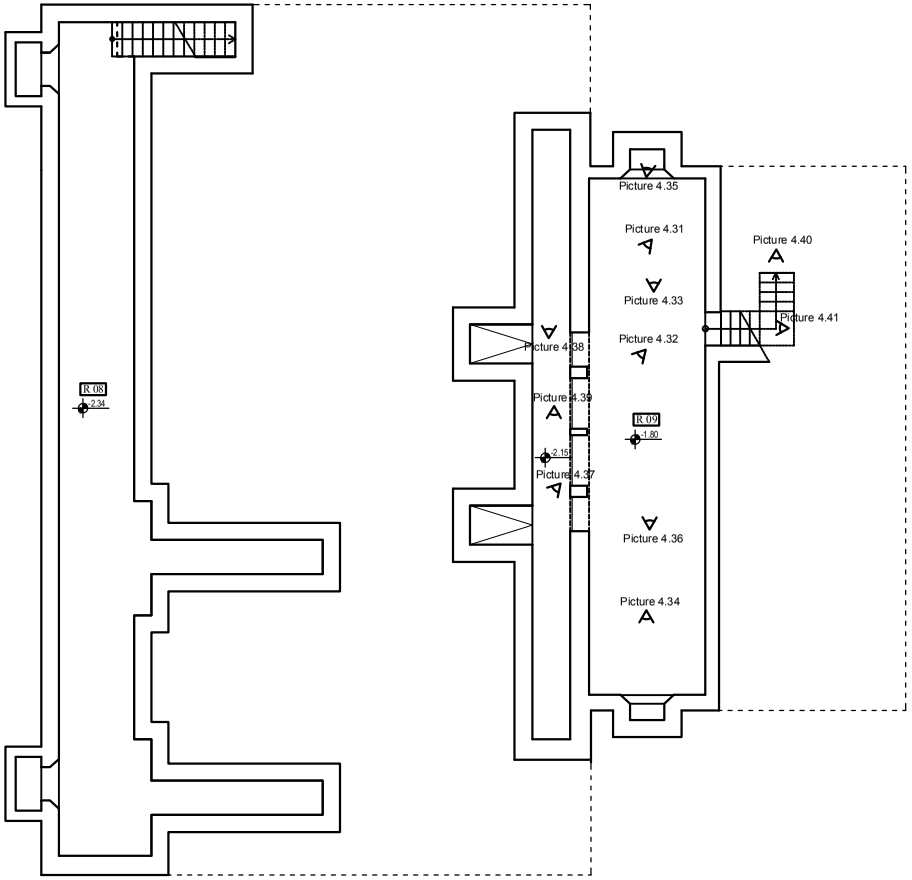

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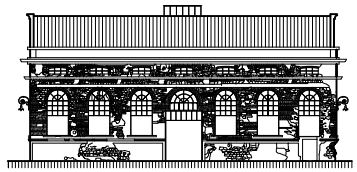

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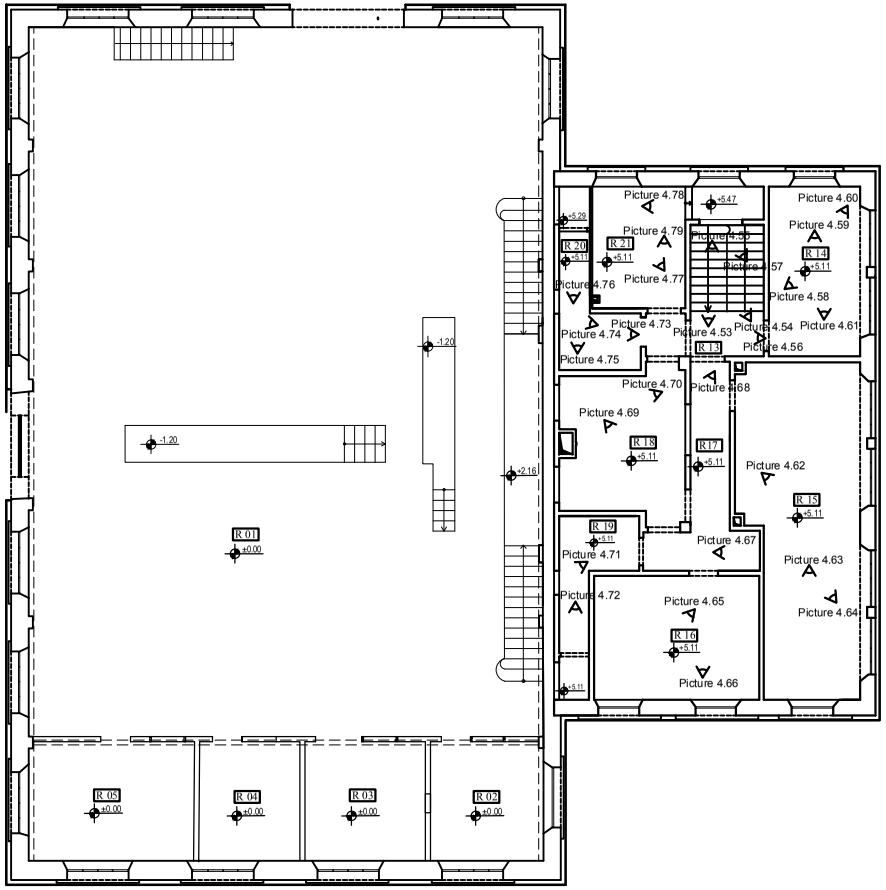

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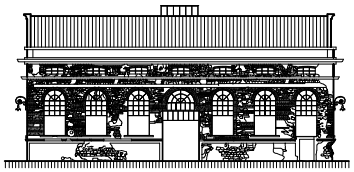


SHEET NAME:	PICTURE
SHEET NUMBER:	**33**

Picture 4.2.10 South-west facade

Picture 4.2.11 North-west facade

Picture 4.2.12 North-west facade

Picture 4.2.13 South-east facade

Picture 4.2.14 Water-tank

Picture 4.2.15 North-east facade

Picture 4.2.16 Room R01, D1 Wall

Picture 4.2.17 Room R01, D2 Wall

Picture 4.2.18 Room R01, D3 Wall

Picture 4.2.19 Room R01, D3 Wall

Picture 4.2.20 Room R01, D4 Wall

Picture 4.2.21

Picture 4.2.22

Picture 4.2.23 Room R02, D4 Wall

Picture 4.2.24 Room R01

Picture 4.2.25 Room R01

Picture 4.2.26 Room R01, S01 Stair

Picture 4.2.27 Room R07

Picture 4.2.28 Room R06, D1 Wall

Picture 4.2.29 Room R07

Picture 4.2.30 Room 07, D4 Wall

Picture 4.2.31 Room R09, D1 Wall

Picture 4.2.32 Room R09, D1 Wall

Picture 4.2.33 Room R09, D2 Wall

Picture 4.2.34 Room R09, D4 Wall

Picture 4.2.35 Room R09

Picture 4.2.36 Room R09

Picture 4.2.37 Room R09

Picture 4.2.38 Room R09

Picture 4.2.39 Room R09

Picture 4.2.40 Stair S03

Picture 4.2.41 Stair S03

Picture 4.2.42 Room R10, S03 Stair

Picture 4.2.43 Room R10, Entrance

Picture 4.2.44 Room R11, D1 Wall

Picture 4.2.45 Room R11, D2 Wall

Picture 4.2.46 Room R11, D3 Wall

Picture 4.2.47 Room R11, D4 Wall

Picture 4.2.48 Room R12, D1 Wall

Picture 4.2.49 Room R12, D2 Wall

Picture 4.2.50 Room R12, D3 Wall

Picture 4.2.51 Room R12, D4 Wall

Picture 4.2.52 Room R12, D4 Wall

Picture 4.2.53 S05 Stair

Picture 4.2.54 S05 Stair

Picture 4.2.55 Room R13, D1 Wall

Picture 4.2.56 Room R13, D2 Wall

Picture 4.2.57 S05 Stair

Picture 4.2.58 Room R14, D1 Wall

Picture 4.2.59 Room R14, D2 Wall

Picture 4.2.60 Room R14, D3 Wall

Picture 4.2.61 Room R14, D4 Wall

Picture 4.2.62 Room R15, D1 Wall

Picture 4.2.63 Room R15, D2 Wall

Picture 4.2.64 Room R15, D3 Wall

Picture 4.2.65 Room R16, D1 Wall

Picture 4.2.66 Room R16, D3 Wall

Picture 4.2.67 Room R17, D4 Wall

Picture 4.2.68 Room R17, D5 Wall

Picture 4.2.69 Room R17, D1 Wall

Picture 4.2.70 Room R17, D2 Wall

Picture 4.2.71 Room R19, D1 Wall

Picture 4.2.72 Room R19, D2 Wall

Picture 4.2.73 Room R20, D1 Wall

Picture 4.2.74 Room R20, D1 Wall

Picture 4.2.75 Room R20, D2 Wall

Picture 4.2.76 Room R20, D2 Wall

Picture 4.2.77 Room R21, D1 Wall

Picture 4.2.78 Room R21, D2 Wall

Picture 4.2.79 Room R21, D5 Wall

4.2.4. Architectural Elements

4.2.4.1. Doors

The doors can be divided in two groups; exterior doors and interior doors in Atelier Building and Administration Building. In both structures, door frames and door wings are not preserved, so information is provided about the door typologies, size and shape. The interior and exterior doors were manufactured in different sizes according to the location.

Atelier Building's Doors

Exterior doors; The Atelier Building has three exterior doors. The main entrance door (300/420 cm) which is the most spectacular rectangular iron door is located in the middle of the front facade. *(see Picture 4.9)* On the same facade of main entrance door, there is other small door (120/175 cm) which was opened later. In the northwest elevation of Atelier Building has the biggest door (328/328 cm.) which was also opened later. *(see Picture 4.10)*

Interior doors; The Atelier building; has six interior doors openings; R02, R03, R04, R05's doors were constructed later. R06 room's door opening is original.

Picture 4.9

Picture 4.10

Administration Building's Doors

Exterior doors; Administration Building has two exterior arched main doors that are 125/313 cm dimension. They are located in northwest facade and the southwest facade have an another arch exterior door that is 118/330 cm dimension. *(see Picture 4.11 and 4.12)*

Interior doors; The Administration Building has fourteen interior door openings. The dimension of interior doors generally are 90/220, 95/220 or 85/220 cm. *(see Picture 4.13)*

Picture 4.11

Picture 4.12

Picture 4.13

4.2.4.2. Windows

The windows have been designed quite wide for lighting and ventilation. In the structure has a different sort of window forms and dimensions. All the windows are constructed with iron. All of the windows' wings and some windows' frames are no existing. The windows' glasses generally have been broken.

The windows are divided into two groups according to both structures; internal and external windows.

Atelier Building's Windows

External windows; In the Atelier Building,R01 room has seventeen rounded-arch windows (180/390 cm.) The fifteen rectangular form windows (50/150 cm) have above arched windows. *(see Picture 4.14)*
Internal windows; The dimension of 127/406 cm two arch windows are existing the number of R06 and R07.

Picture 4.14

Administration Building's Windows

External windows; In the Administration Building, the size of 300/126 cm ten rounded-arch windows with iron frame are existing to the ground floor and the first floor. *(see Picture 4.15)* In addition, the six of 625/166 cm size rounded-arch windows are covered ground floor and first floor. The three rounded windows which is 70 cm diameter are existing. These rounded window are located between two rounded-arch windows that is 625/166 cm dimension.*(see Picture 4.16)* In the basement floor, the number of R09 room has two rectangular windows (156/100 cm). *(see Picture 4.18)* These rectangular have areaway. *(see Picture 4.19)* The R18, R19 and R20 number of the rooms has rectangular form windows (about 100/150 cm) which are in above wall. *(see Picture 4.17)*

Picture 4.15

Picture 4.16

Picture 4.17

Picture 4.18

Picture 4.19

Internal windows; In the Administration Building, The R18 number of room has an interior window (150/120 cm) opening without window frame. (see Picture 4.20) The R15 number of room has an other internal window (126/140 cm) which is located above the landing of S05 staircase. *(see Picture 4.21 and 4.22)*

Picture 4.20

Picture 4.21

Picture 4.22

Staircases

All the staircases are made with reinforced-concrete and the height of steps are about 29-30 cm. The steps have stepnose about 2-3 cm. All the handrails have disappeared.

In the Atelier building, two reinforced concrete staircase (S01) which can be reached in the same landing, right and left couple of staircase has thirteen steps to one arm. It connects to R01 and R07. *(see Picture 4.23)* In the basement floor, R01 and R08 rooms connect with S02 staircase which has twelve steps. *(see Picture 4.24)*
In the Administration building, the ground floor provides access to the basement floor with 'L' shaped staircase (S03). *(see Picture 4.25)* In the ground floor has been connected to first floor with 'U' shape S05 staircase. *(see Picture 4.26)*

Picture 4.23

Picture 4.24

Picture 4.25

Picture 4.26

4.2.3. Structural Elements

4.2.3.1. Vertical Bearings

Columns

Columns are the main structural system of the two buildings are made of reinforced concrete and they are cast in-situ. In Atelier Building, the columns are in side the exterior walls. However, four of them can been visible and their sizes are 52x52 cm 34x52 cm and 34x41 cm. In the Atelier building, the trusses settle each columns. Thus, columns bear the truss system of roof. *(see Picture 4.27)*

In the basement floor of Administration Building, the three columns are appeared, two of them are 33x50 cm the other is 19x50 cm. Other visible two columns are in first floor of Administration building, they are 30x30 cm and 32x40 cm. *(see Picture 4.28 and Picture 4.29)*

Picture 4.27

Picture 4.28

Picture 4.29

Walls

In both buildings, according to the wall system has three different kinds of walls that are stone and brick masonry. Brick walls are divided into two different kinds of brick; solid brick masonry wall and hollow brick masonry wall. From the ground floor up to 130 cm is stone wall to the exterior walls. Stone and solid brick are used together for exterior walls. The thickness of exterior solid brick walls are 50-45 cm. Interior of the walls are made with solid brick masonry wall which is 20-15 cm. However, R02, R03, R04, R05 rooms, which are constructed later, are made with hollow brick masonry wall.

4.2.3.2. Horizontal Bearings

Beams

In Atelier Building's beams are precast to bear the truss hoist. Precast beam settled cantilever column. The other beam systems are cast in-situ reinforced-concrete. The beams connected with each columns. Generally, the size of beams are 25/10 or 10/5 cm. *(see Picture 4.30)*

Slabs

The slabs have been made with reincorced-concrete and the thickness of slabs are 20 cm. *(see Picture 4.31)*

Ceilings

The Administration building's ceilings are flat and covered with plaster. *(see Picture 4.32)*

Picture 4.30

Picture 4.31

Picture 4.32

Roofs

The Atelier building's roof system is copper braided and iron constructed roof vault. *(see Picture 4.33)* There are six iron trusses for carring to the vault roof. Each of the trusses are settled on each columns. There are 3 meter width ventilation on the center of roof vault. *(see Picture 4.34)*

The roof system of Administration building has been made of wooden gable roof. The roof is covered with Marseille type tile.

Finishing of floor

The floor coverings of Administration building; basement floor is covered with concrete and the other floors are covered with red hexagonal ceramic.

The floor covering of Atelier building; the basement and the ground floor are covered with concrete. Room R06 and R07 floor covering are red hexagonal ceramic.

Arches

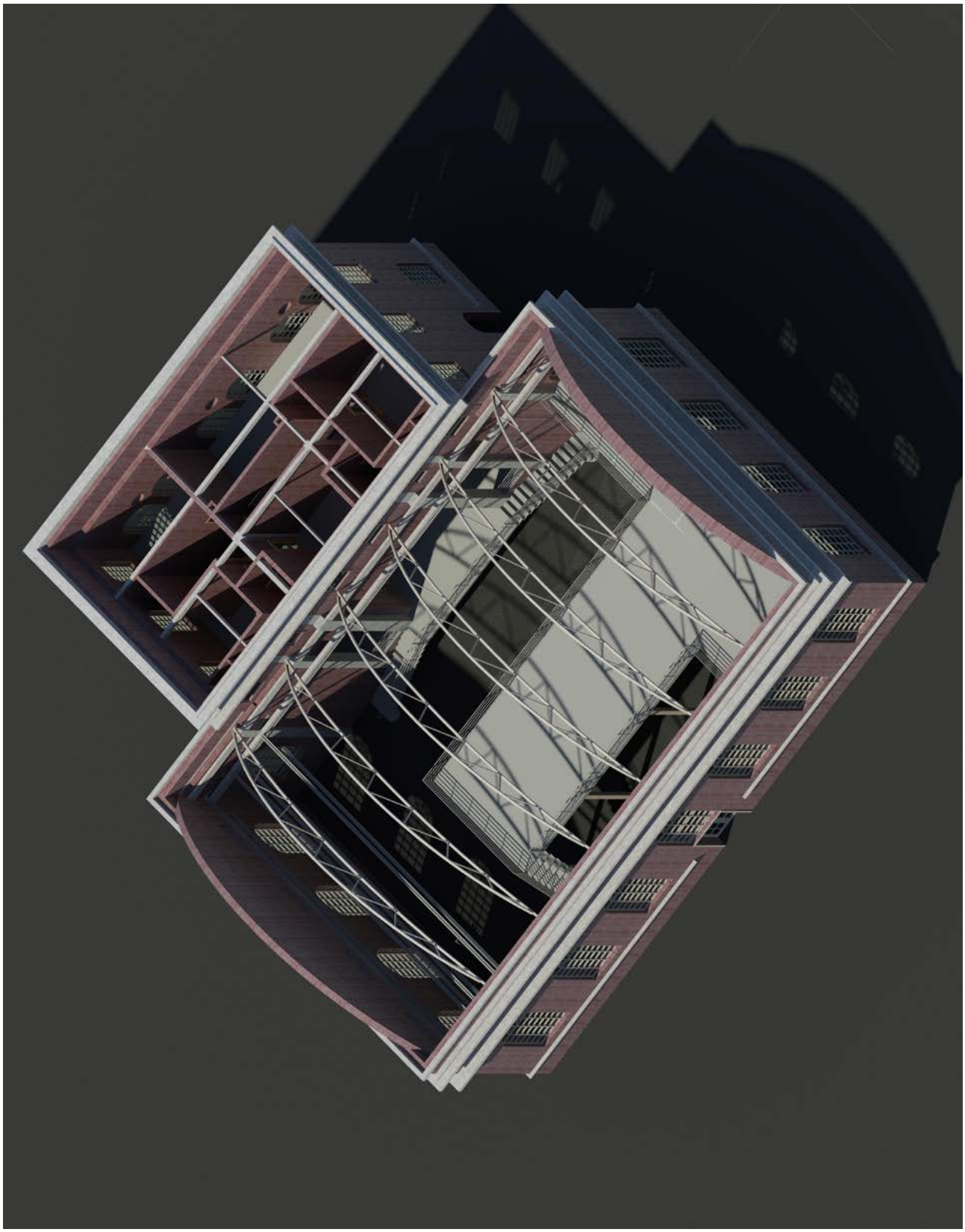
All the windows and Administration building's doors are made with rounded-arch or semi-circular arched, commonly called Roman arch. *(see Picture 4.35)* All the arches constructed with solid brick masonry. Rounded-arch is a structure that spans a space and supports structure and weight above it.

Picture 4.33

Picture 4.34

Picture 4.35

Structure of the Edirne Power Plant



4.3. Physical Condition

4.3.1. Decay Analysis

It was analysed for actual condition of the building. (see Decay List D01 to D31)

CHEMICAL AND PHYSICAL DEGRADATION

NAME OF DECAYS	DESCRIPTIONS	PICTURES
BLISTERING	Separated, air-filled, raised hemispherical elevations on the face of brick resulting from the detachment of an outer brick layer. This detachment is not related to the brick structure. Blistering of brick masonry can caused by expansion of the weathered surface layer leading to loss of the plaster.	
PEELING	Shedding, coming off or partial detachment of a superficial layer (thickness : submillimetric to millimetric) having the aspect of a film or coating which has been applied on the brick surface.	
LIGHT EROSION	Missing of plaster on the brick surface. The brick structure can been observed. (thickness : centimetre)	
EROSION	Loss of original surface, leading to smoothed shapes. Loss of original surface, which can be due to a variety of reasons such as granular disintegration, scaling etc..	

MISSING PART	Empty space, obviously located in the place of some formerly existing part. Protruding and particularly exposed parts of materials are typical locations for material loss resulting in-missing parts.	
DEPOSIT	Chromatic modification of the material, generally resulting from natural or artificial ageing and not involving in most cases visible surface deterioration.	
POWDERING	Terms sometimes employed for describing granular disintegration of finely grained stones.	
FILM	Thin covering or coating layer generally of organic nature, generally homogeneous, follows the stone surface. A film may be opaque or translucent.	
SPOT	A kind of discolouration of limited extent and generally of unattractive appearance.	

LEACHING	A kind of discolouration, water leaks can alter surface of colour.	
EFFLORESCENCE	Generally whitish, powdery or whisker-like crystals on the surface. Efflorescences are generally poorly cohesive and commonly made of soluble salt crystals.	
RUST	Rust is composed of iron oxides. In colloquial usage, the term is applied to red oxides, formed by the reaction of iron and oxygen in the presence of water or air moisture.	
STAIN	A kind of discolouration of limited extent and generally of unattractive appearance.	
HUMIDITY	Corresponds to the darkening (lower hue) of a surface due to dampness. The denomination moist area is preferred to moist spot, moist zone or visible damp area.	

CORROSION	Corrosion can be defined as the degradation of a material due to a reaction with its environment. Degradation implies deterioration of physical properties of the material. This can be a weakening of the material due to a loss of cross-sectional area, it can be the shattering of a metal due to hydrogen embrittlement, or it can be the cracking of a polymer due to sunlight exposure.	
CRACKING	Individual fissure, clearly visible by the naked eye, resulting from separation of one part from another.	

BIOLOGICAL DEGRADATION

PRESENCE OF VEGETATION	Vegetation (e.g. Tree, fern, herb) grow close to bilding. If buildings are not maintained, plants will eventually colonise places where water is accessible, extending roots into joints and fractures. As the roots grow they can widen these joints and cracks and break the stone. They may also contribute to keep areas damp. This in turn, exacerbates other processes such as salt deterioration.	
ALGA	Alga are microscopic vegetal organisms without stem nor leaves which can be seen outdoors and indoors, as powdery or viscous deposits (thickness : tenth of mm to several mm). Algae form green brown, or black veil like zones and can be found mainly in situations where the substrate remains moistened for long periods of time.	

ANTHROPOGENIC DEGRADATION

ASHES DEPOSIT	Burning of materials stain. Ashes deposits are generally the result of an act of vandalism.	
MECHANICAL DAMAGE	Mechanical damage due to the impact of a projectile (bullet, shrapnel) or of a hard tool. Mechanical damages are made by human.	
PAINTING SPRAY, GRAFFITI	Engraving, scratching, cutting or application of paint, ink or similar matter on the stone surface. Graffitis are generally the result of an act of vandalism.	

4.3.1.1 Causes of Deterioration in the Power Plant

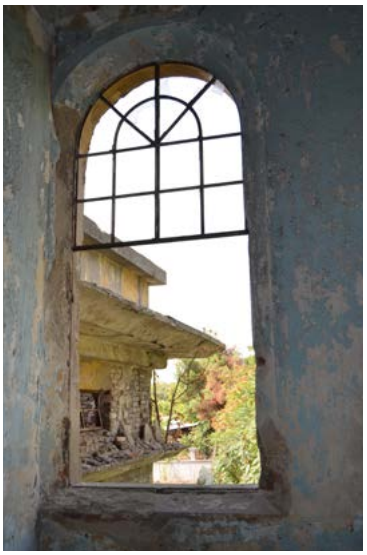
Vandalism

Common deterioration problems of the Power Plant is vandalism which occurs other deterioration problems.

When the building have been abandoned, it causes lack of security. Some elements (all the doors' frame and wings, half of the windows' frames, handrails and some part of roofs) were removed from the building and the glasses of windows were broken by vandals. Thus, some parts of building (especially, open roof part and open windows part) were exposed to rainwater, snow and wind. Water penetration through the local damage.

While the doors' frame, windows' frame and balusters of staircases had been removed, some doors and windows border and staircases were damaged. *(see Picture 4.7, 4.8, 4.9, 4.10)*

Picture 4.7



Picture 4.8

Picture 4.9

Some walls have graffiti because of vandals. *(see Picture 4.11)* Fire is a major cause of damage. Vandals can intentionally or accidentally set the building on fire and burn it. It can cause lack of materials.*(see Picture 4.12)*

Picture 4.10

Picture 4.11

Picture 4.12

Defective Plastered Rendering

In Edirne Power Plant, defective plastered rendering occurs on external walls, internal walls and ceilings. Especially, Southwest facade (main facade), the defects of rendering are caused by biological attacks arising out of penetrating rain. Prior to being decomposed and broken apart, plastered rendering determined the growth of alga and, when detached, removed part of the bedding mortar joints.

Roof Defects

Two sides of the roofs were removed by vandals. Thus, the building was exposed to rainwater, sun, wind and snow. The roof appears rust because of the water. *(see picture 4.10)*

Defective Rainwater Goods

The galvanized iron rainwater pipes were broken. Thus, the gutters, eaves and saggings were deteriorated. Defective rainwater goods cause overflow of water, particularly in heavy rain; and an improper disposal of water at ground level. There are a few possible causes to the defective of rainwater goods of Power Plant. Due to defective rainwater goods,

some galvanized iron rainwater goods became rusted, biological grow and corrosion appered. *(see Picture 4.13)*

Location of Building & Climate Conditions

The building takes place near the Tunca River. It leads to building defects. Some seasons, Tunca River overflows and the City of Edirne became floods. Thus, the water coming from the ground causes dampness penetration and structural instability.

It is important to consider the climatic conditions of Edirne Power Plant and the effect on building materials. The Southwest Facade (main facade which looks Tunca River) covered with plaster almost falled off. This is because, the strongest wind is the south wind in the City of Edirne. Another reason is humidity which it comes from Tunca River.

The climate of Edirne is hot summers and cold winter. Particularly, in winter time, there are a few chilly and snowy days. It causes the bulging.

Cracking of Walls

Although the Power Plant has many decays, it has two cracks without serious condition. The structure of the building is mostly sound. The one crack is between R11 and R12 room wall, and other one is at the R20 room's wall.

Man-made Intervention

R02, R03, R04 and R05 rooms were constructed later. However, the rooms have been constructed inconvenience way. *(see Picture 4.14)*

Corrosion

Corrosion mostly appears on ceilings. The ceiling is exposed of water and humidity. Thus, ceilings have a lack of materials and iron bars are oxidated. This lack and decay of the materials can weakened the structure of the Power Plant.

Picture 4.13

Picture 4.14

Picture 4.15

Peeling Paint

Peeling paint occurs on interior and exterior walls, columns and ceilings which are exposed to excessive rain and dampness.

Biological Degradation

Biological Degradation occurs when there is a presence of water or high moisture content in masonry walls. It can easily flourish in environmental conditions of high humidity and lack of ventilation. Alga appears mostly on the ceilings, up and down part of the walls and under the windows.

Vegetations are visible near the facade of the building and some plants have grown on the gutter. Roots of plants can go deep into the existing holes causing further cracks and water penetration. *(see Picture 4.15)*

Dampness Penetration through Walls

Dampness penetration through walls are serious matter, because this building is near the river and there is a pool in the garden. Water penetration occurs commonly through walls exposed to prevailing wet wind or rain. With the existence of gravity, water is likely to penetrate through capillaries of the masonry materials. In this building, many deteriorations cause dampness penetration. For instance; biological degradations (alga, fungi, vegetations... etc.) efflorescence and blistering.

Dampness occurred in the walls because of other factors such as leaching gutters, down pipes and defective drains, due to inadequate ventilation.

4.3.2. Alteration Analysis

The Alteration Analysis is a preliminary work for restorational appliances. *(see table A01 to A09)*

4.3.2.1. Original Elements Surviving Today

Original Elements which exist from the construction of a building.

4.3.2.2. Human-made Intervention

Added Elements: Elements which are added afterwards the construction of a building. R02, R03, R04 and, R05 rooms were constructed afterwards. The floor of the R01 room, two holes are constructed later. The door (120/181cm) which opens to R05 (at the south-west elevation) space was opened later.

Removed Elements: The elements which were removed consciously. All the inside and outside doors were removed. All the handrails were removed too. W6 window's sill at the south-west-elevation was removed. Half of the arched windows' frames were removed. Also two sides of steel vault roof at the Atelier Building were removed. Some iron lamps were removed too.

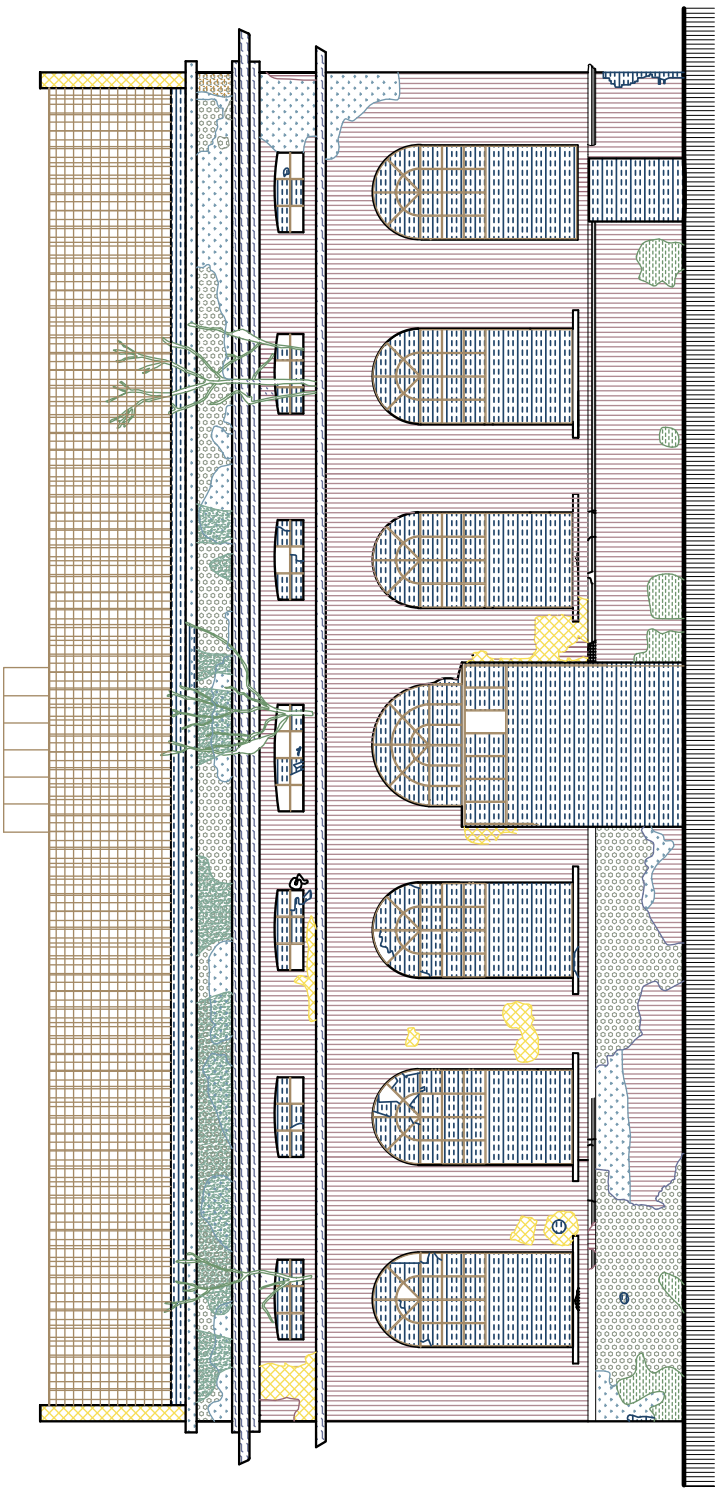
Changed Elements: Elements that were at the construction of building but changed at different times. W01 numbered wall of R07 and R12 spaces was burned by human. One sides of the doors of R21 and R16 spaces were broken when the case of the doors were removed. All the walls and the roof of R20 space was fired. Some stairs were damaged during the removal of handrails.

4.3.2.3. Changes by Nature's Effect

Loss of Materials: Materials that were at the construction of building but disappear with the affect of nature. All the South-west elevation plasters also the cornices of the windows were disappeared. Some plasters at the North-east elevation was damaged.

SOUTH-WEST ELEVATION

D01



LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION

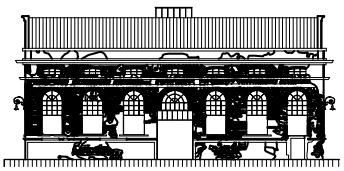
- 01 BLISTERING
- 02 PEELING
- 03 LIGHT EROSION
- 04 EROSION
- 05 MISSING PART
- 06 DEPOSIT
- 07 POWDERING
- 08 FILM
- 09 SPOT
- 10 LEACHING
- 11 EFFLORESCENCE
- 12 RUST
- 13 STAIN
- 14 HUMIDITY
- 15 CORROSION
- 16 CRACKING

BIOLOGICAL DEGRADATION

- 17 PRESENCE OF VEGETATION
- 18 ALGA

ANTHROPOGENIC DEGRADATION

- 19 ASHES DEPOSIT
- 20 MECHANICAL DAMAGE
- 21 PAINTING, GRAFFITI



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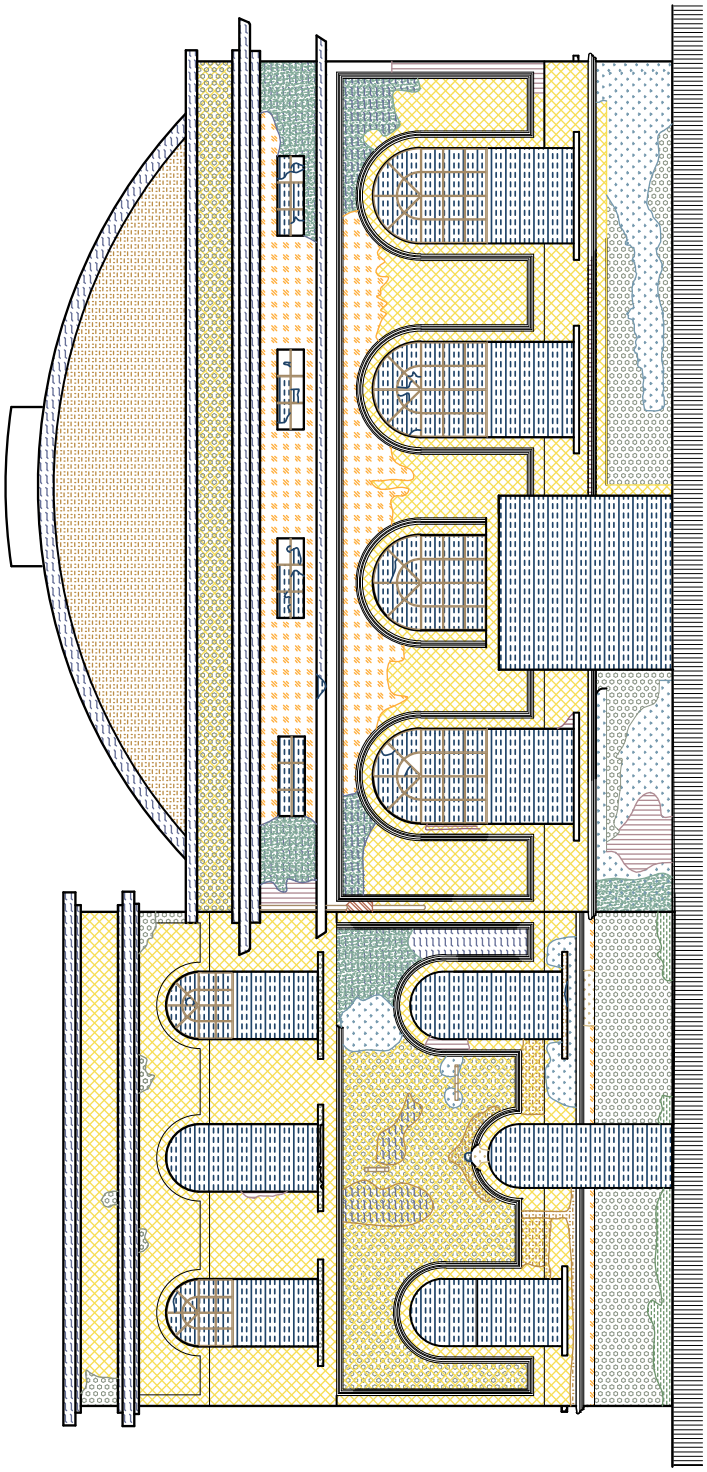
NORTH-WEST ELEVATION

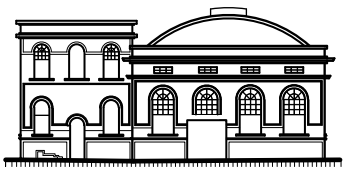
D02

DECAY LIST



LEGEND OF DEGRADATION

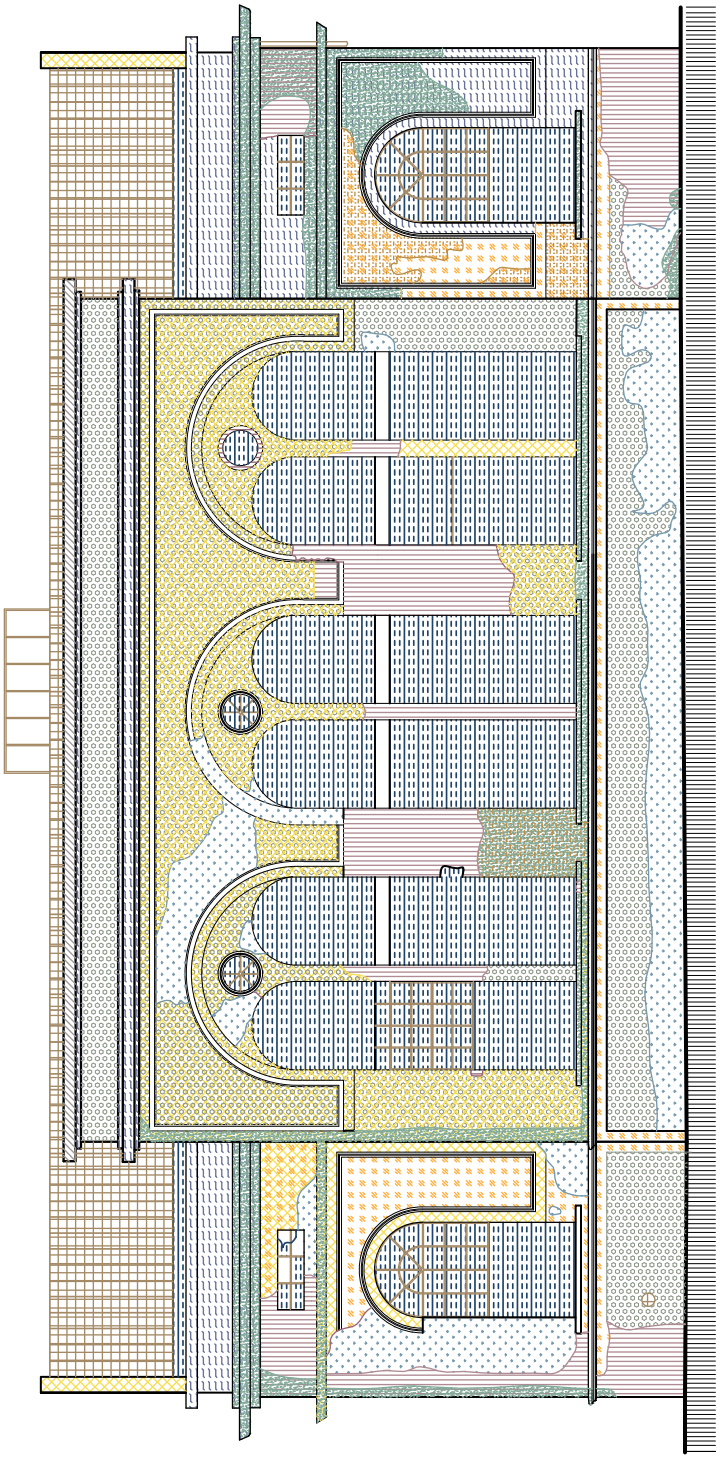
CHEMICAL AND PHYSICAL DEGRADATION					
01 BLISTERING	08 FILM	16 CRACKING
02 PEELING	09 SPOT	**BIOLOGICAL DEGRADATION**
03 LIGHT EROSION	10 LEACHING	17 PRESENCE OF VEGETATION
04 EROSION	11 EFFLORESCENCE	18 ALGA
05 MISSING PART	12 RUST	**ANTHROPOGENIC DEGRADATION**
06 DEPOSIT	13 STAIN	19 ASHES DEPOSIT
07 POWDERING	14 HUMIDITY	20 MECHANICAL DAMAGE
	15 CORROSION	21 PAINTING, GRAFFITI



0 1 2 3 4 5 m

NORTH- EAST ELEVATION

D03



LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION

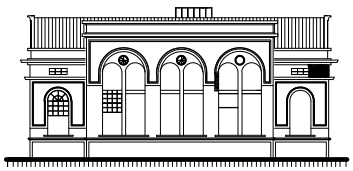
- 01 BLISTERING
- 02 PEELING
- 03 LIGHT EROSION
- 04 EROSION
- 05 MISSING PART
- 06 DEPOSIT
- 07 POWDERING
- 08 FILM
- 09 SPOT
- 10 LEACHING
- 11 EFFLORESCENCE
- 12 RUST
- 13 STAIN
- 14 HUMIDITY
- 15 CORROSION
- 16 CRACKING

BIOLOGICAL DEGRADATION

- 17 PRESENCE OF VEGETATION
- 18 ALGA

ANTHROPOGENIC DEGRADATION

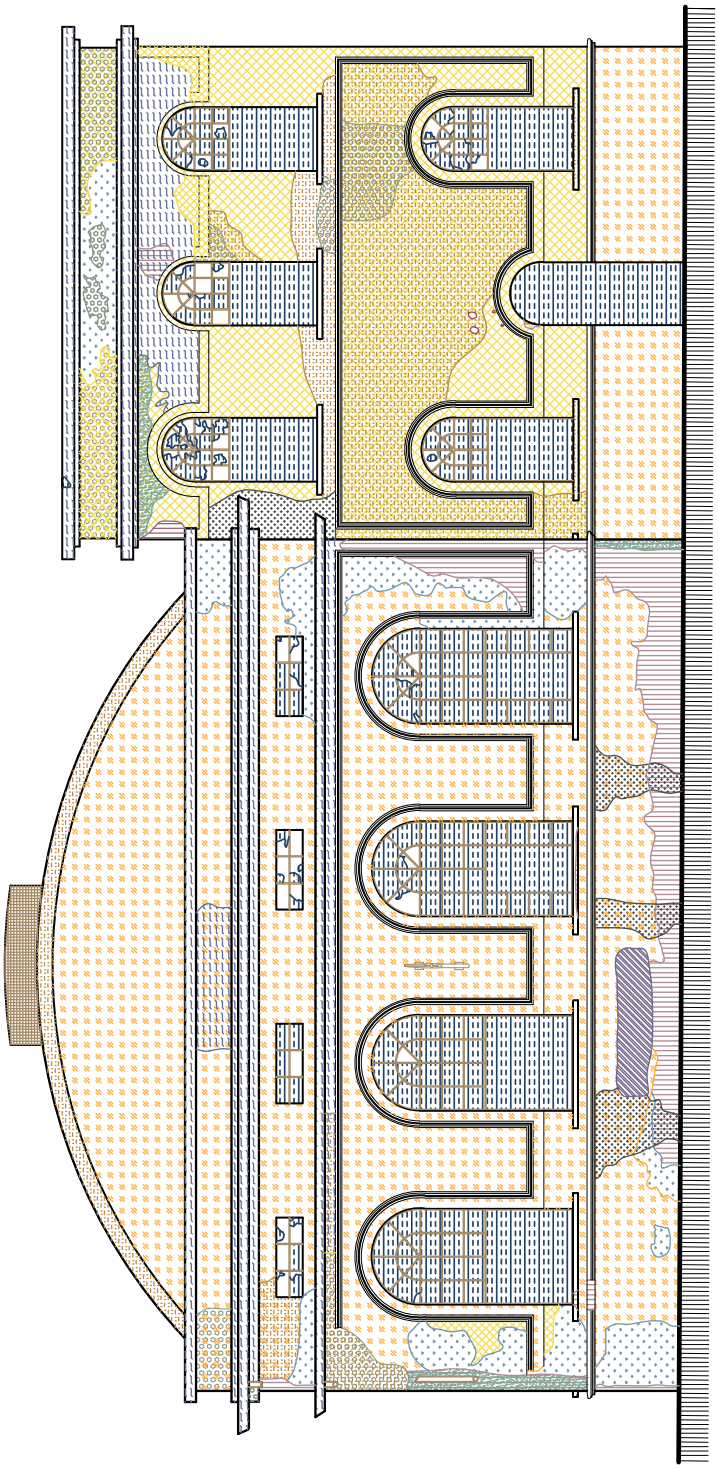
- 19 ASHES DEPOSIT
- 20 MECHANICAL DAMAGE
- 21 PAINTING, GRAFFITI



0 1 2 3 4 5 m

SOUTH-EAST ELEVATION

D04



LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION

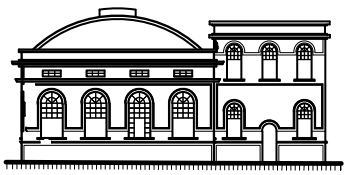
01 BLISTERING
02 PEELING
03 LIGHT EROSION
04 EROSION
05 MISSING PART
06 DEPOSIT
07 POWDERING
08 FILM
09 SPOT
10 LEACHING
11 EFFLORESCENCE
12 RUST
13 STAIN
14 HUMIDITY
15 CORROSION
16 CRACKING

BIOLOGICAL DEGRADATION

17 PRESENCE OF VEGETATION
18 ALGA

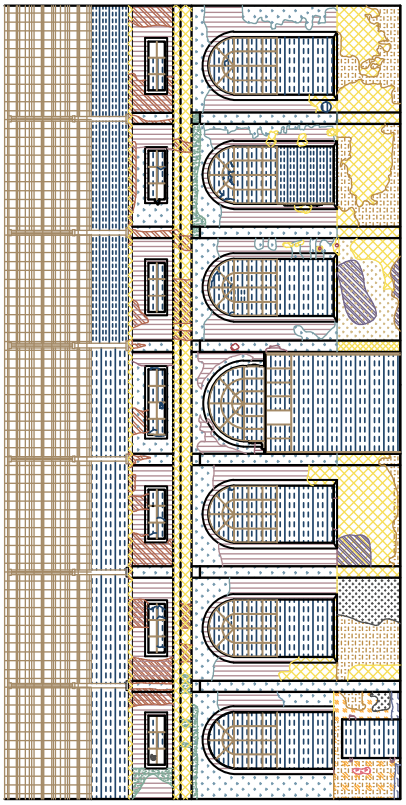
ANTHROPOGENIC DEGRADATION

19 ASHES DEPOSIT
20 MECHANICAL DAMAGE
21 PAINTING, GRAFFITI

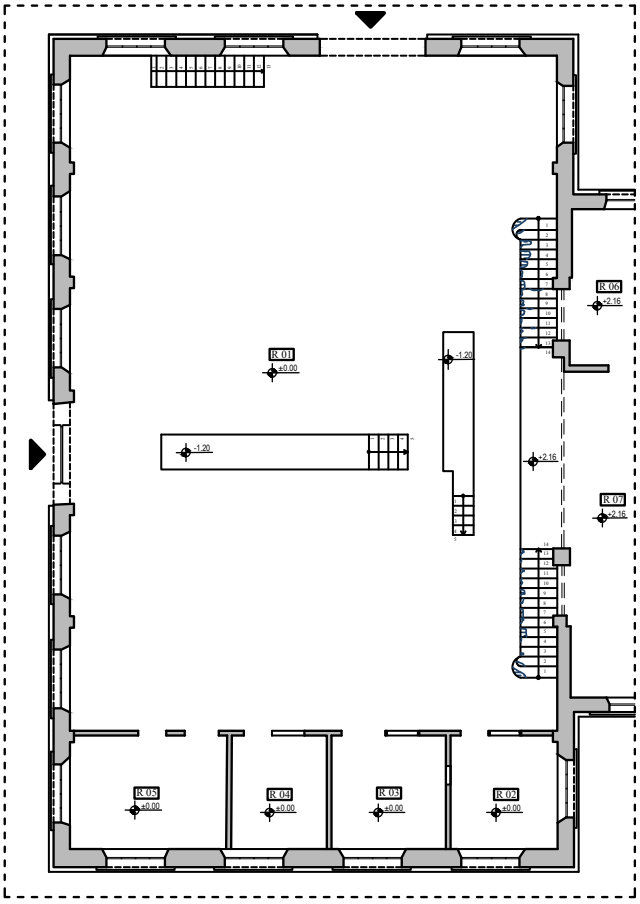


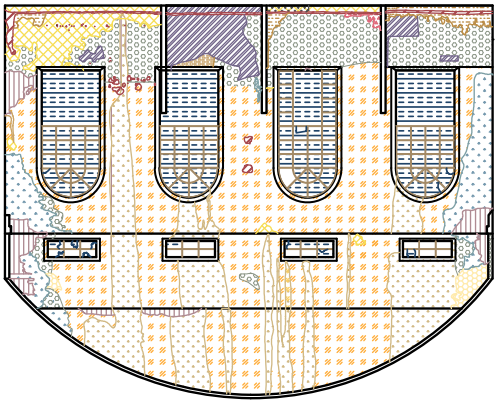
0 1 2 3 4 5 m

ROOM R01



D3

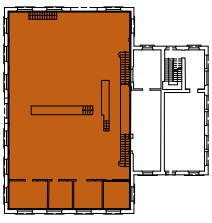




D2

LEGEND OF DEGRADATION

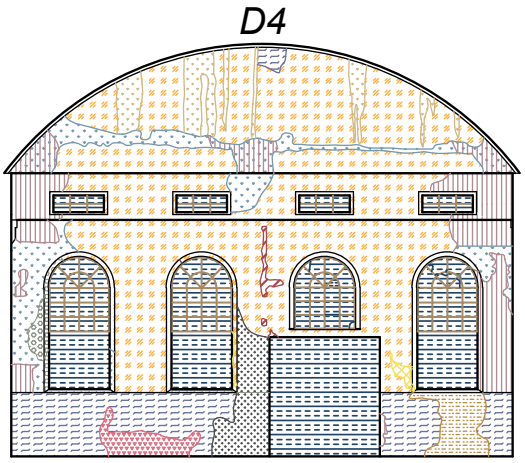
CHEMICAL AND PHYSICAL DEGRADATION					
01 BLISTERING	08 FILM	16 CRACKING
02 PEELING	09 SPOT	**BIOLOGICAL DEGRADATION**
03 LIGHT EROSION	10 LEACHING	17 PRESENCE OF VEGETATION
04 EROSION	11 EFFLORESCENCE	18 ALGA
05 MISSING PART	12 RUST	**ANTHROPOGENIC DEGRADATION**
06 DEPOSIT	13 STAIN	19 ASHES DEPOSIT
07 POWDERING	14 HUMIDITY	20 MECHANICAL DAMAGE
	15 CORROSION	21 PAINTING, GRAFFITI

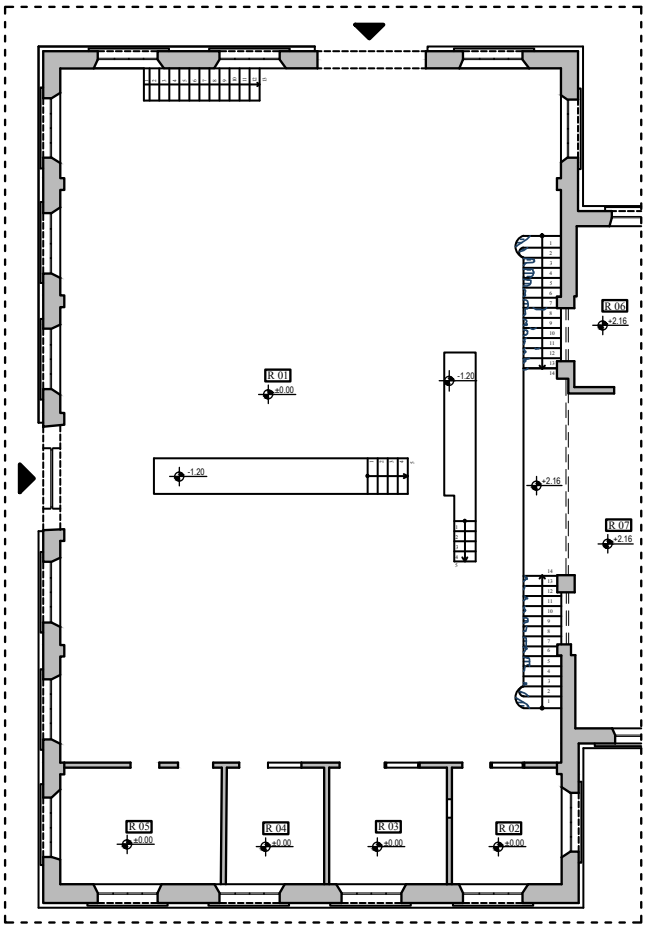


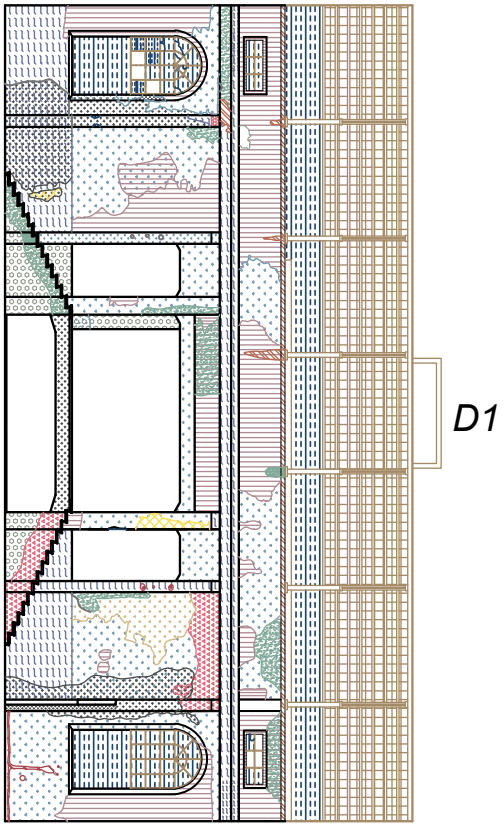
0 1 2 3 4 5 m

ROOM R01

D06

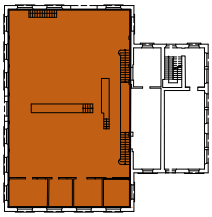






LEGEND OF DEGRADATION

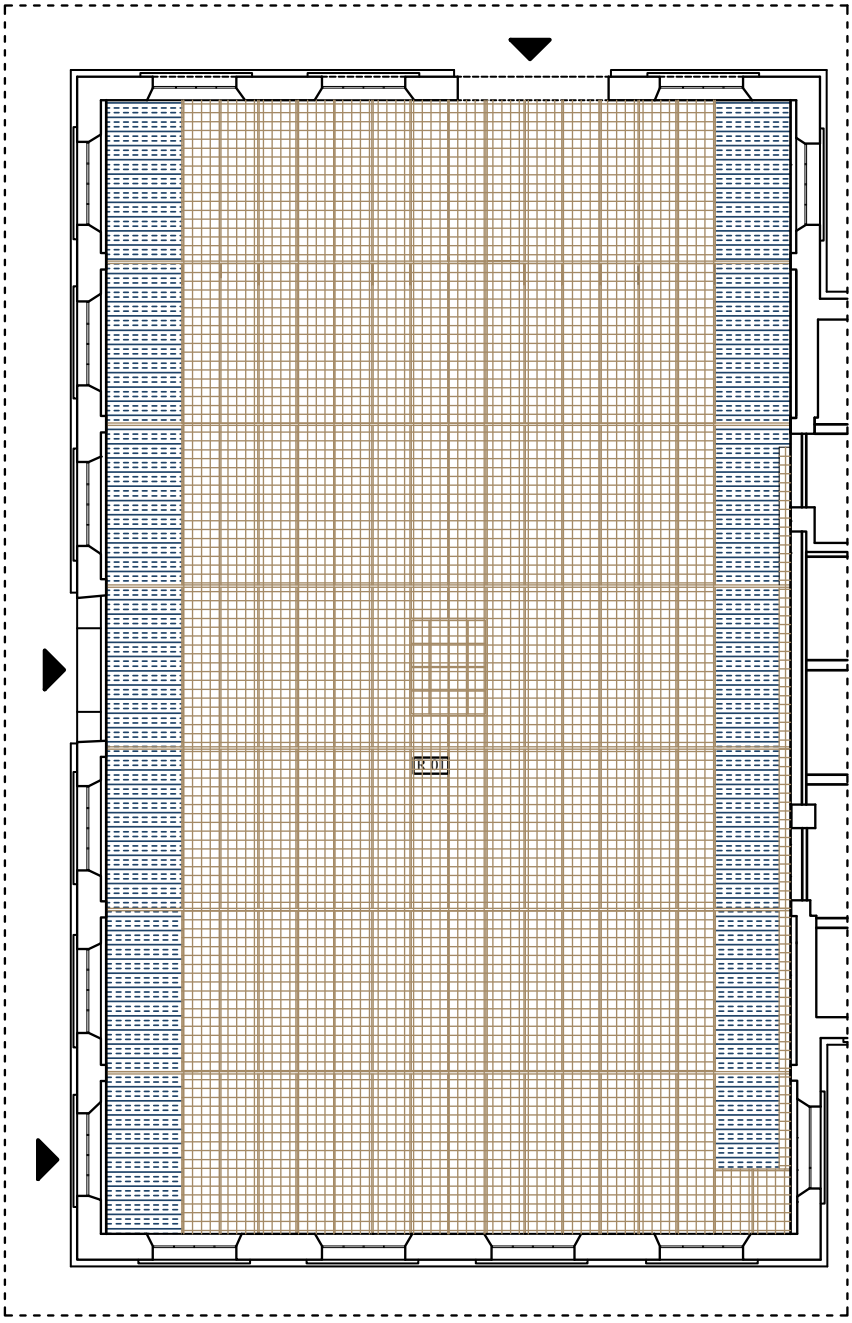
CHEMICAL AND PHYSICAL DEGRADATION					
01 BLISTERING	08 FILM	16 CRACKING
02 PEELING	09 SPOT	**BIOLOGICAL DEGRADATION**
03 LIGHT EROSION	10 LEACHING	17 PRESENCE OF VEGETATION
04 EROSION	11 EFFLORESCENCE	18 ALGA
05 MISSING PART	12 RUST	**ANTHROPOGENIC DEGRADATION**
06 DEPOSIT	13 STAIN	19 ASHES DEPOSIT
07 POWDERING	14 HUMIDITY	20 MECHANICAL DAMAGE
	15 CORROSION	21 PAINTING, GRAFFITI



0 1 2 3 4 5 m

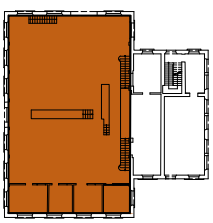
ROOM R01 CEILING

D07



LEGEND OF DEGRADATION

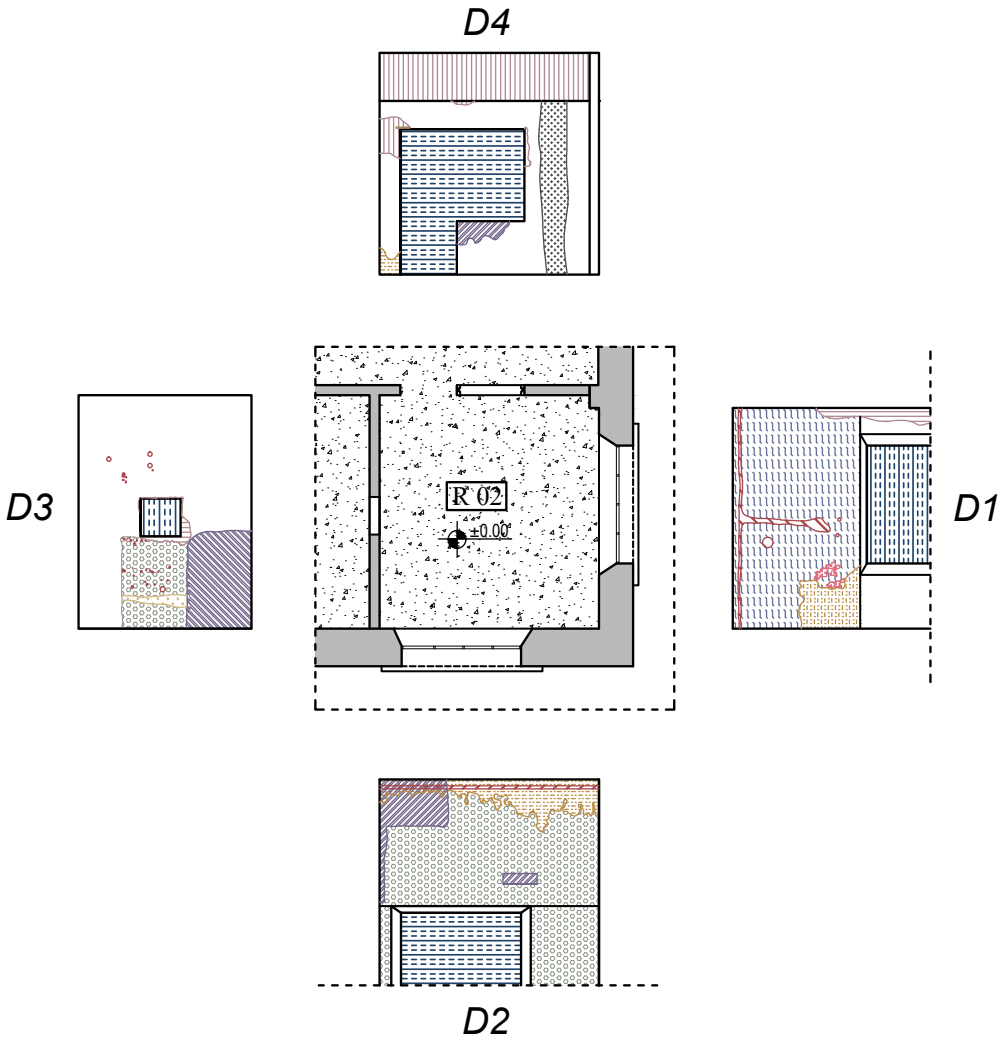
CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION	
01 BLISTERING	08 FILM	15 CORROSION	16 CRACKING	17 PRESENCE OF VEGETATION	20 MECHANICAL DAMAGE
02 PEELING	09 SPOT			18 ALGA	21 PAINTING, GRAFFITI
03 LIGHT EROSION	10 LEACHING			ANTHROPOGENIC DEGRADATION	
04 EROSION	11 EFFLORESCENCE			19 ASHES DEPOSIT	
05 MISSING PART	12 RUST				
06 DEPOSIT	13 STAIN				
07 POWDERING	14 HUMIDITY				



0 1 2 3 4 5 m

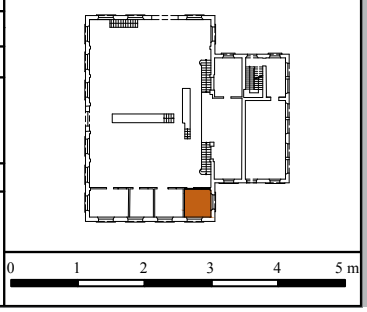
ROOM 02

D08



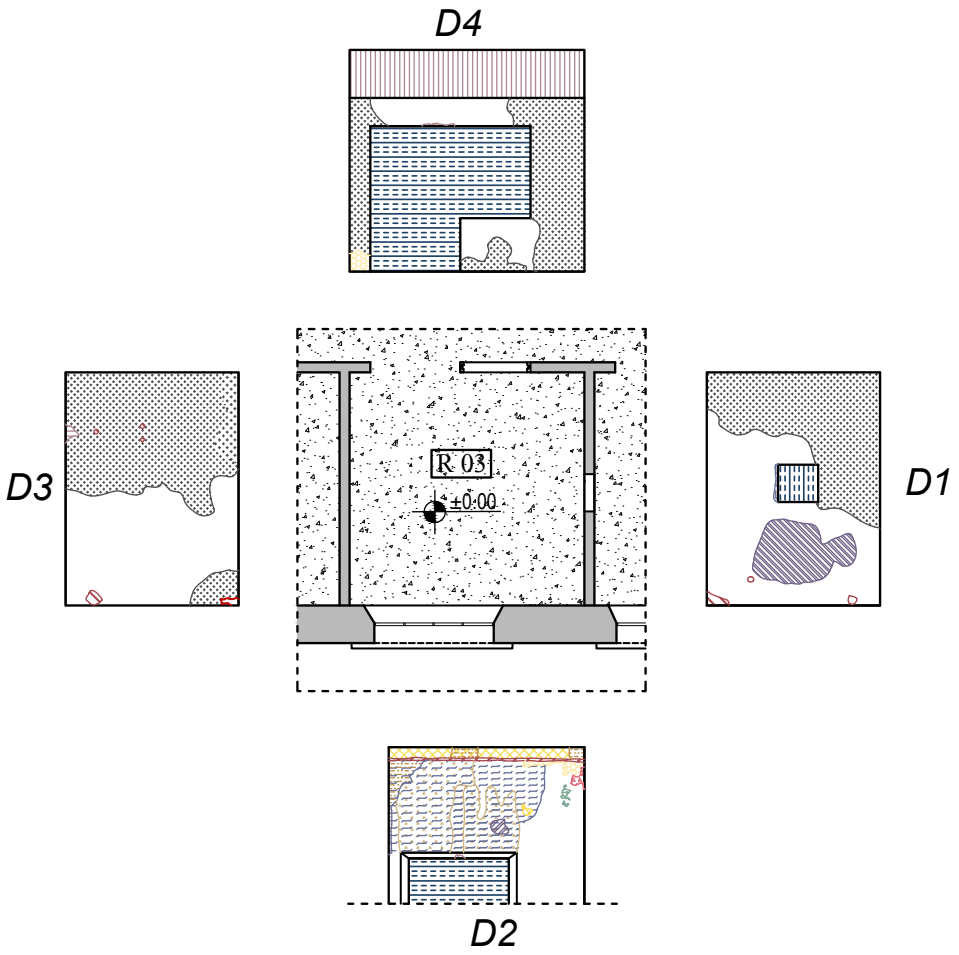
LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION	
01 BLISTERING	08 FILM	16 CRACKING		17 PRESENCE OF VEGETATION	
02 PEELING	09 SPOT			18 ALGA	
03 LIGHT EROSION	10 LEACHING			ANTHROPOGENIC DEGRADATION	
04 EROSION	11 EFFLORESCENCE			19 ASHES DEPOSIT	
05 MISSING PART	12 RUST			20 MECHANICAL DAMAGE	
06 DEPOSIT	13 STAIN			21 PAINTING, GRAFFITI	
07 POWDERING	14 HUMIDITY				
	15 CORROSION				



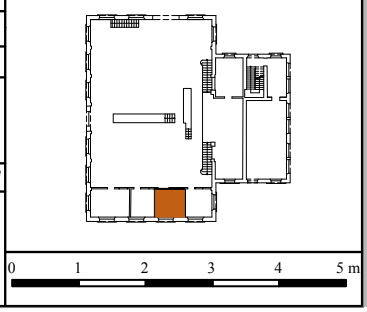
ROOM 03

D09

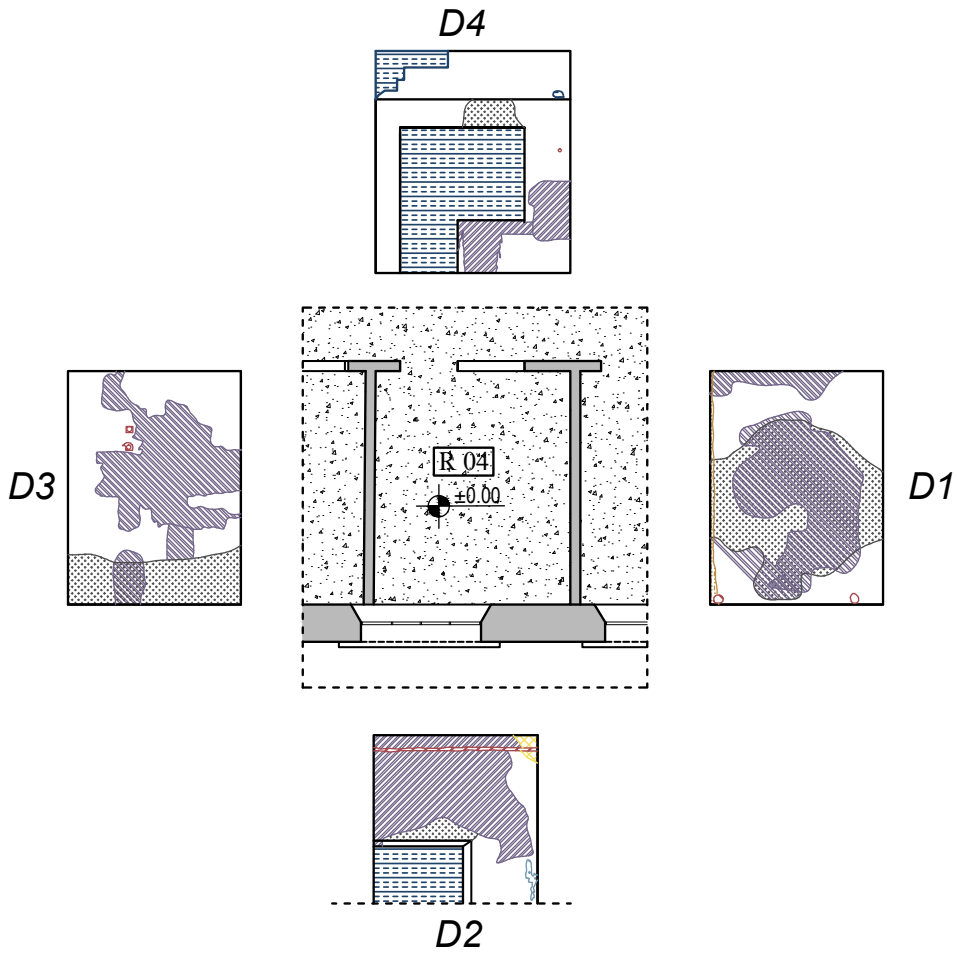


LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION			
01 BLISTERING	08 FILM	16 CRACKING	
02 PEELING	09 SPOT	BIOLOGICAL DEGRADATION	
03 LIGHT EROSION	10 LEACHING	17 PRESENCE OF VEGETATION	
04 EROSION	11 EFFLORESCENCE	18 ALGA	
05 MISSING PART	12 RUST	ANTHROPOGENIC DEGRADATION	
06 DEPOSIT	13 STAIN	19 ASHES DEPOSIT	
07 POWDERING	14 HUMIDITY	20 MECHANICAL DAMAGE	
	15 CORROSION	21 PAINTING, GRAFFITI	

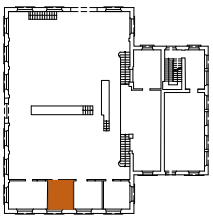


ROOM 04



LEGEND OF DEGRADATION

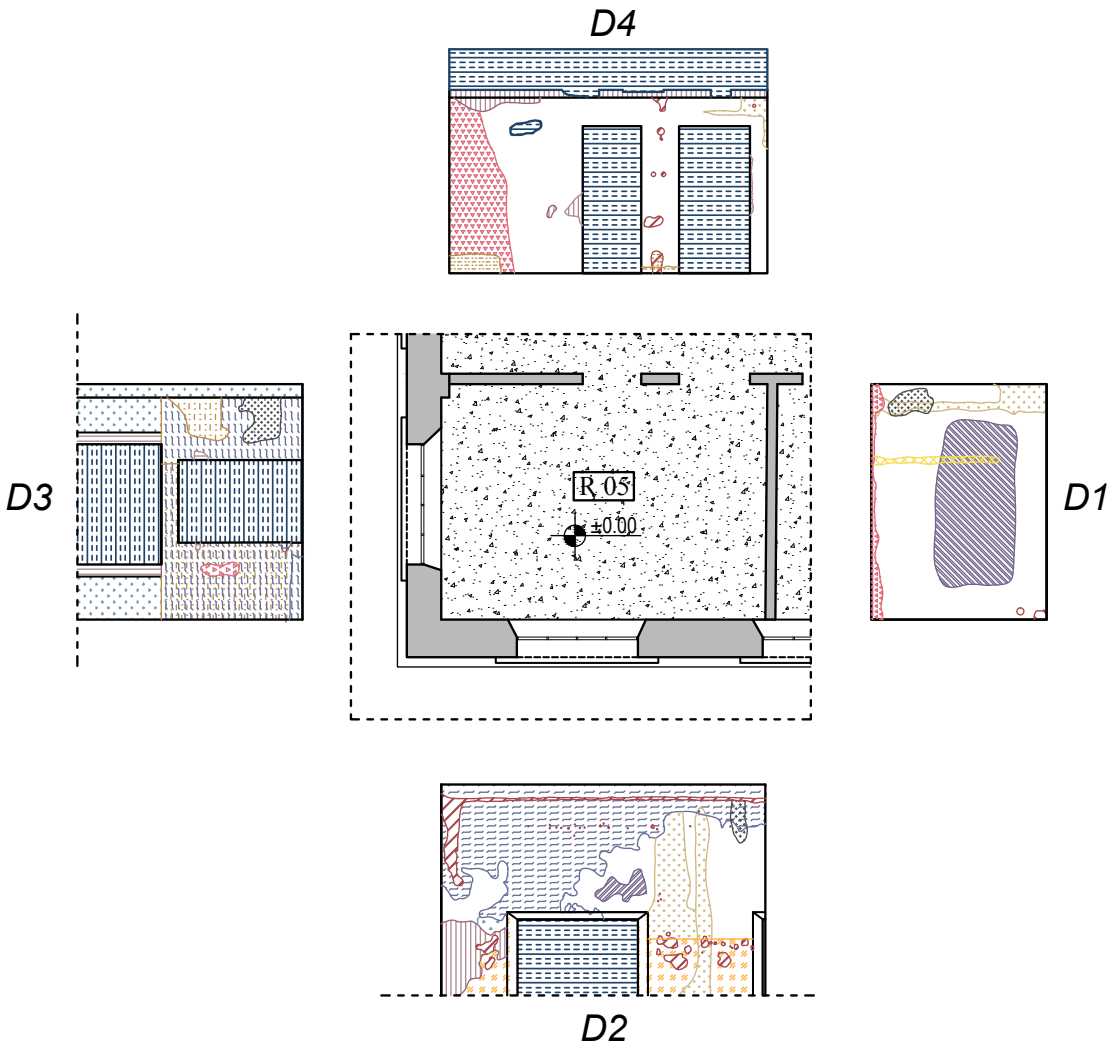
CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION	
01 BLISTERING	08 FILM	15 CORROSION	16 CRACKING	17 PRESENCE OF VEGETATION	19 ASHES DEPOSIT
02 PEELING	09 SPOT			18 ALGA	20 MECHANICAL DAMAGE
03 LIGHT EROSION	10 LEACHING			ANTHROPOGENIC DEGRADATION	21 PAINTING, GRAFFITI
04 EROSION	11 EFFLORESCENCE				
05 MISSING PART	12 RUST				
06 DEPOSIT	13 STAIN				
07 POWDERING	14 HUMIDITY				



0 1 2 3 4 5 m

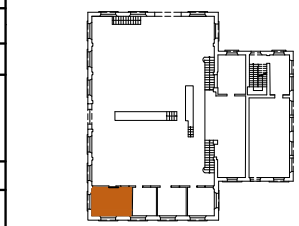
ROOM 05

D11



LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION	
01 BLISTERING		08 FILM		16 CRACKING	
02 PEELING		09 SPOT		17 PRESENCE OF VEGETATION	
03 LIGHT EROSION		10 LEACHING		18 ALGA	
04 EROSION		11 EFFLORESCENCE		ANTHROPOGENIC DEGRADATION	
05 MISSING PART		12 RUST		19 ASHES DEPOSIT	
06 DEPOSIT		13 STAIN		20 MECHANICAL DAMAGE	
07 POWDERING		14 HUMIDITY		21 PAINTING, GRAFFITI	
		15 CORROSION			



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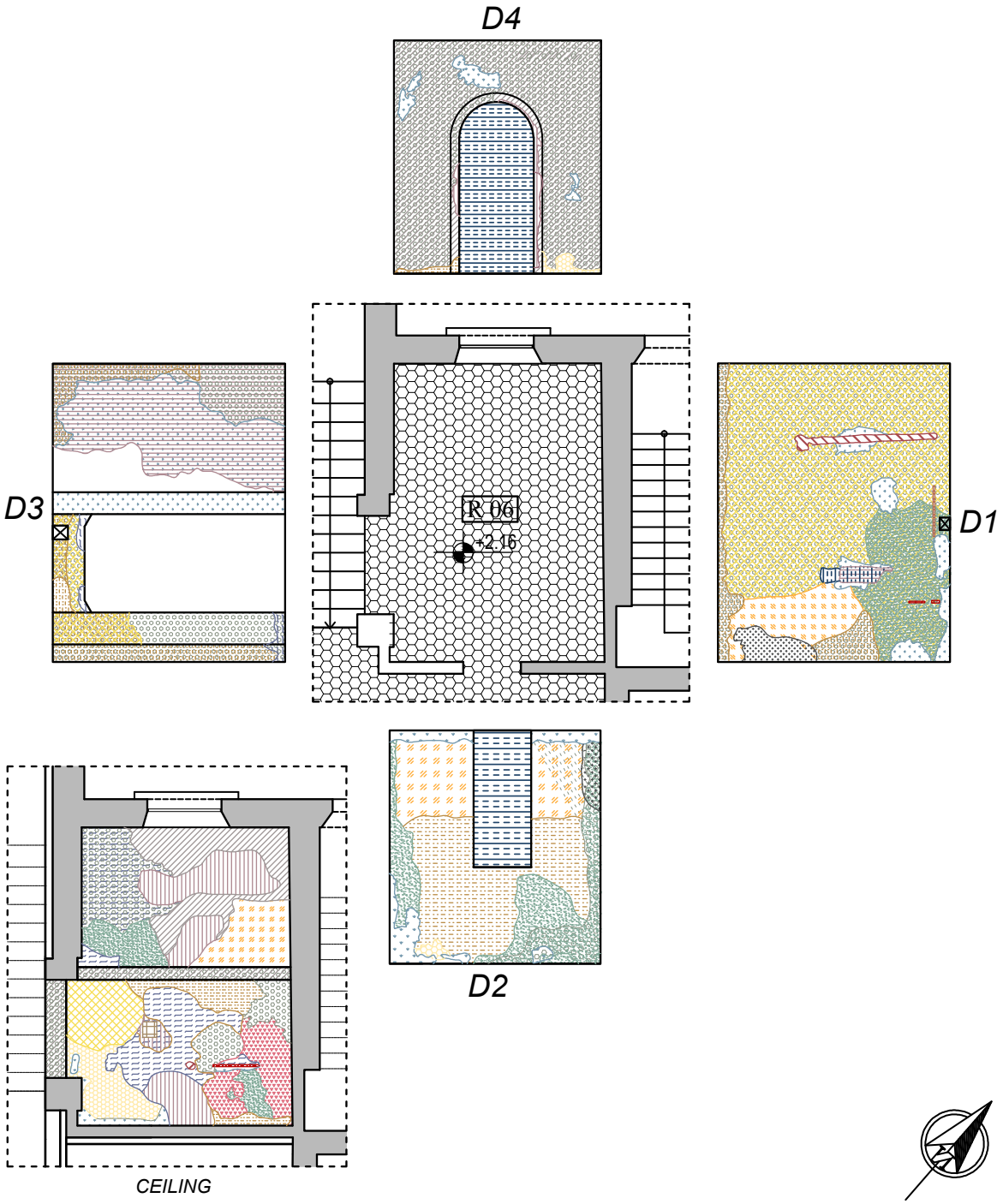
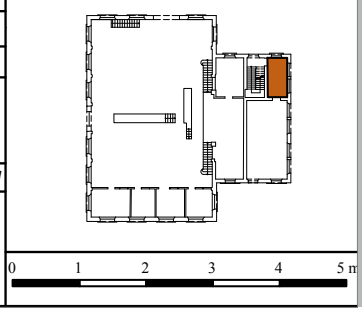


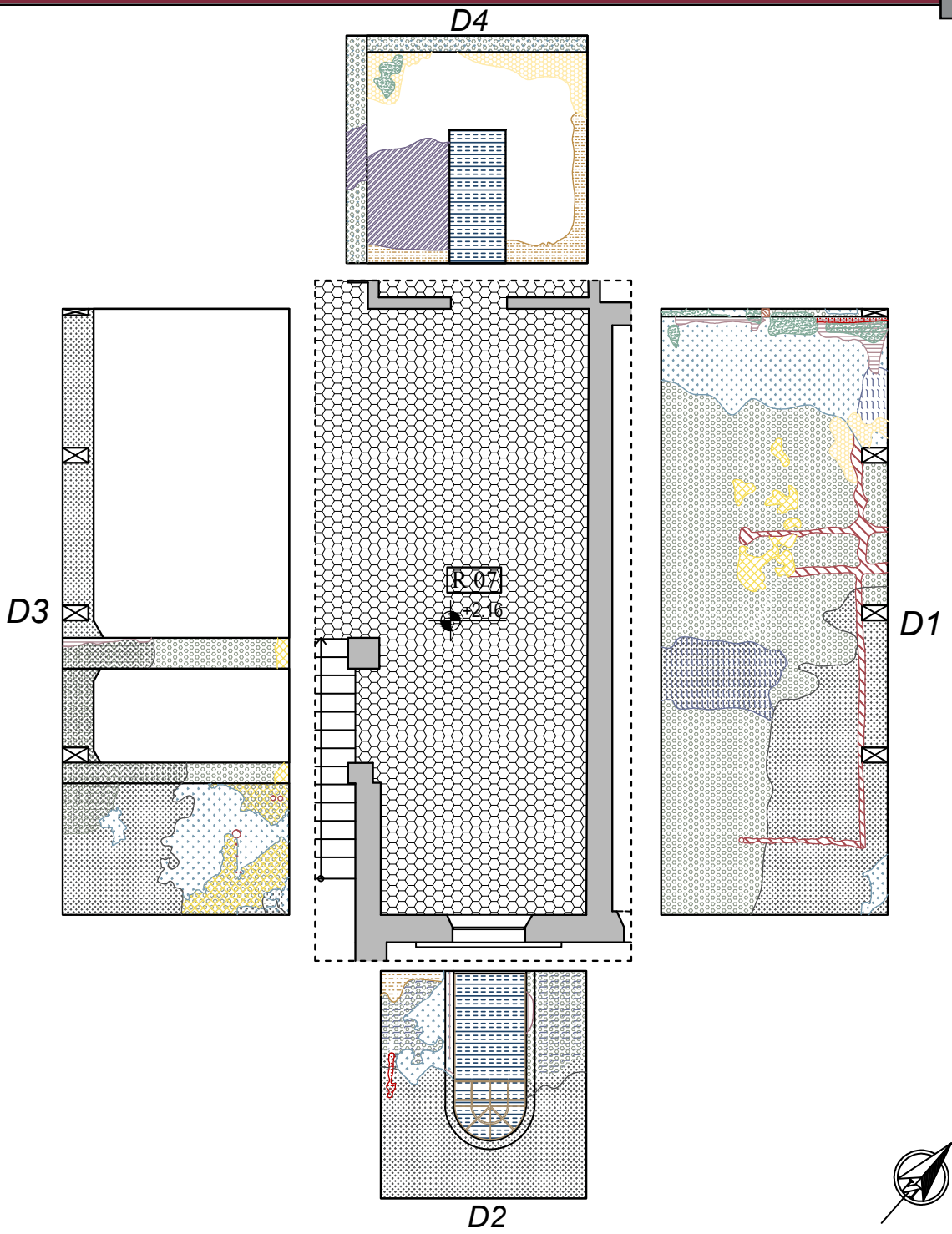
LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION	
01 BLISTERING	08 FILM	16 CRACKING		17 PRESENCE OF VEGETATION	
02 PEELING	09 SPOT			18 ALGA	
03 LIGHT EROSION	10 LEACHING			ANTHROPOGENIC DEGRADATION	
04 EROSION	11 EFFLORESCENCE			19 ASHES DEPOSIT	
05 MISSING PART	12 RUST			20 MECHANICAL DAMAGE	
06 DEPOSIT	13 STAIN			21 PAINTING, GRAFFITI	
07 POWDERING	14 HUMIDITY				
	15 CORROSION				



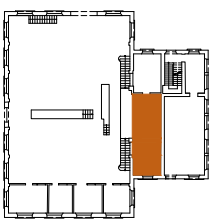
ROOM 07

D13



LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION	
01 BLISTERING	08 FILM	15 CORROSION		16 CRACKING	
02 PEELING	09 SPOT			17 PRESENCE OF VEGETATION	
03 LIGHT EROSION	10 LEACHING			18 ALGA	
04 EROSION	11 EFFLORESCENCE			ANTHROPOGENIC DEGRADATION	
05 MISSING PART	12 RUST			19 ASHES DEPOSIT	
06 DEPOSIT	13 STAIN			20 MECHANICAL DAMAGE	
07 POWDERING	14 HUMIDITY			21 PAINTING, GRAFFITI	

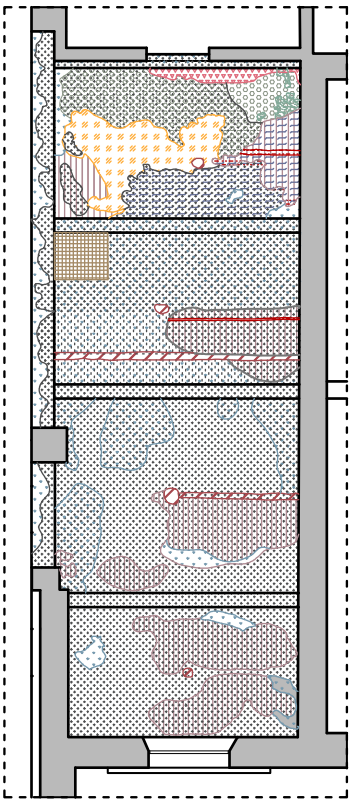


0 1 2 3 4 5 m

ROOM 07 CEILING

D14

DECAY LIST



LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION

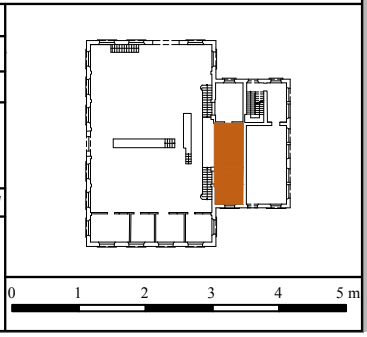
01 BLISTERING
02 PEELING
03 LIGHT EROSION
04 EROSION
05 MISSING PART
06 DEPOSIT
07 POWDERING
08 FILM
09 SPOT
10 LEACHING
11 EFFLORESCENCE
12 RUST
13 STAIN
14 HUMIDITY
15 CORROSION
16 CRACKING

BIOLOGICAL DEGRADATION

17 PRESENCE OF VEGETATION
18 ALGA

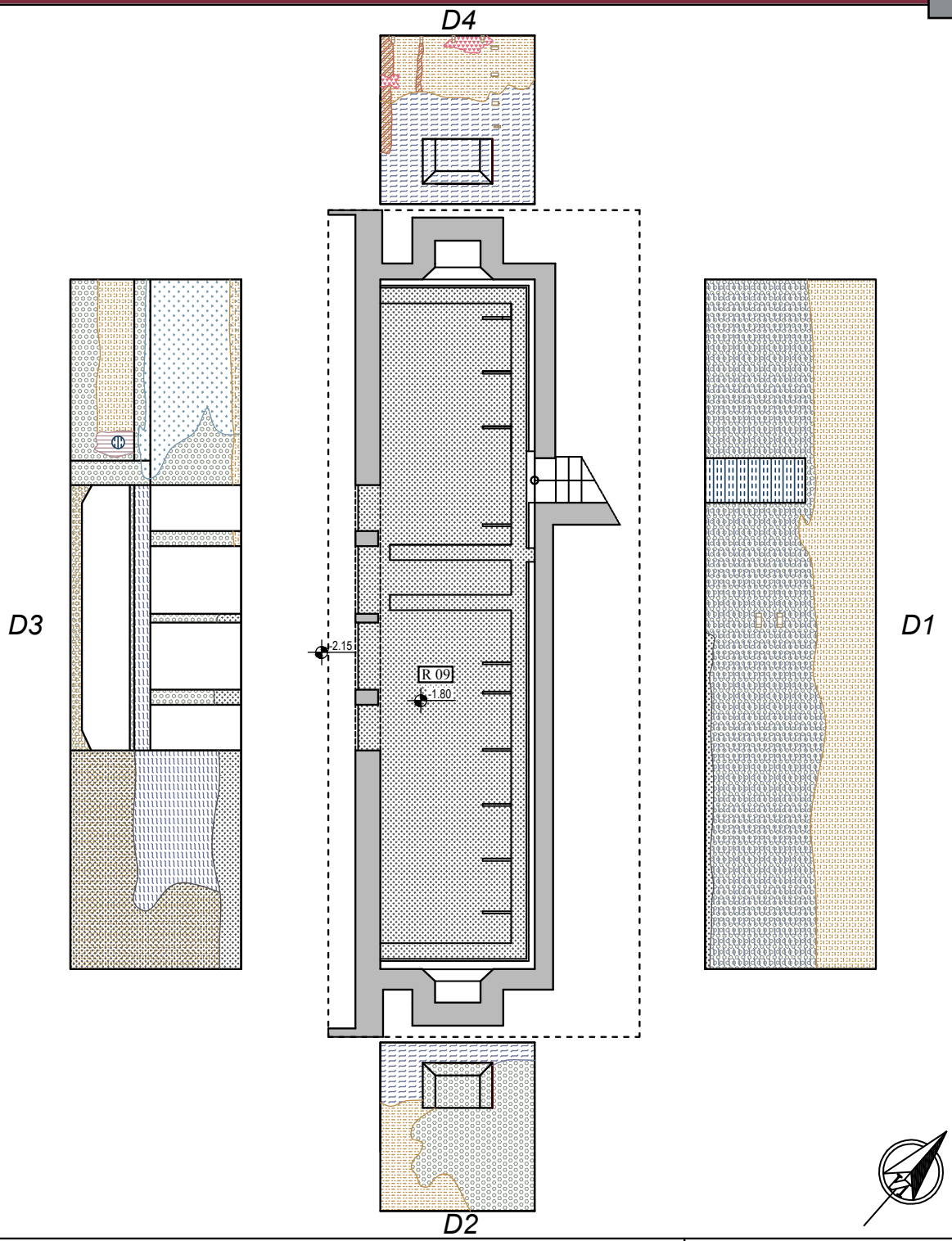
ANTHROPOGENIC DEGRADATION

19 ASHES DEPOSIT
20 MECHANICAL DAMAGE
21 PAINTING, GRAFFITI



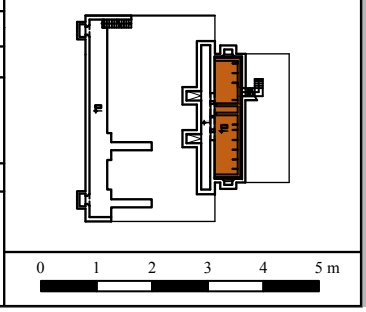
ROOM 09

D15



LEGEND OF DEGRADATION

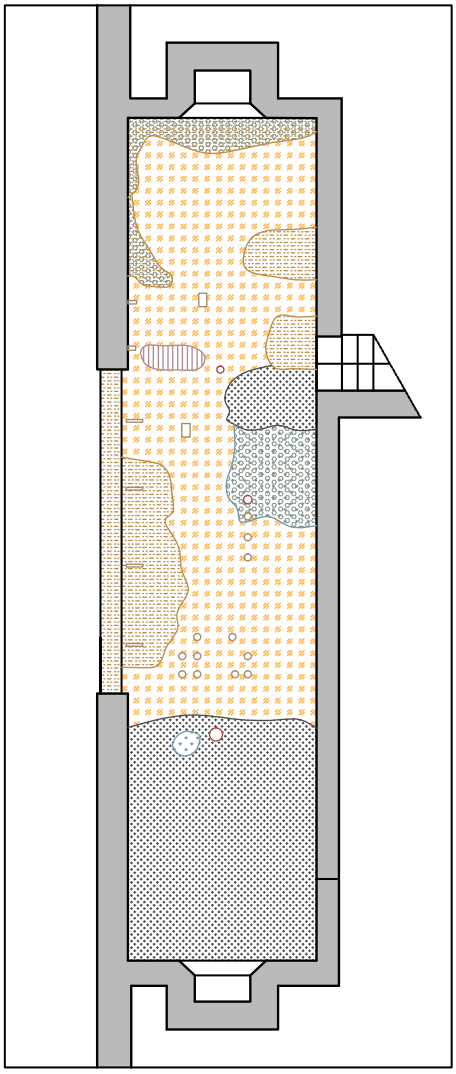
CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION		ANTHROPOGENIC DEGRADATION	
01 BLISTERING	08 FILM	15 CORROSION	16 CRACKING	17 PRESENCE OF VEGETATION		19 ASHES DEPOSIT	
02 PEELING	09 SPOT			18 ALGA		20 MECHANICAL DAMAGE	
03 LIGHT EROSION	10 LEACHING					21 PAINTING, GRAFFITI	
04 EROSION	11 EFFLORESCENCE						
05 MISSING PART	12 RUST						
06 DEPOSIT	13 STAIN						
07 POWDERING	14 HUMIDITY						



ROOM 09 CEILING

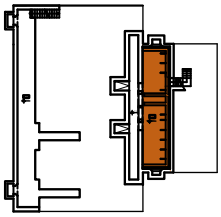
D16

DECAY LIST



LEGEND OF DEGRADATION

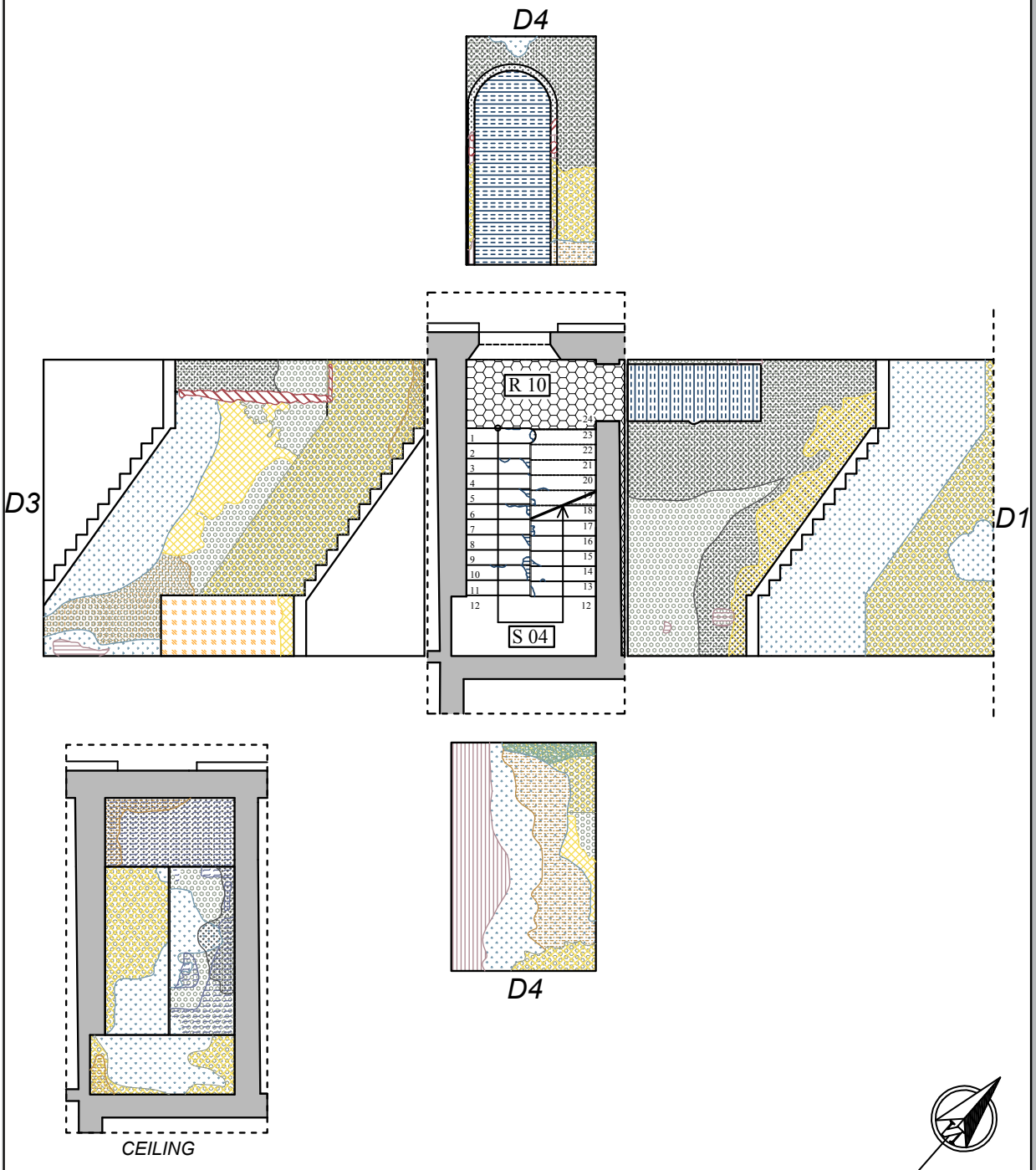
CHEMICAL AND PHYSICAL DEGRADATION					
01 BLISTERING	08 FILM	16 CRACKING
02 PEELING	09 SPOT	BIOLOGICAL DEGRADATION
03 LIGHT EROSION	10 LEACHING	17 PRESENCE OF VEGETATION
04 EROSION	11 EFFLORESCENCE	18 ALGA
05 MISSING PART	12 RUST	ANTHROPOGENIC DEGRADATION
06 DEPOSIT	13 STAIN	19 ASHES DEPOSIT
07 POWDERING	14 HUMIDITY	20 MECHANICAL DAMAGE
	15 CORROSION	21 PAINTING, GRAFFITI



0 1 2 3 4 5 m

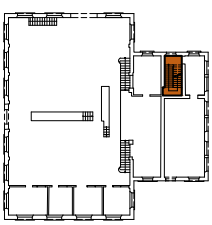
ROOM 10 & STAIRCASE S03

D17



LEGEND OF DEGRADATION

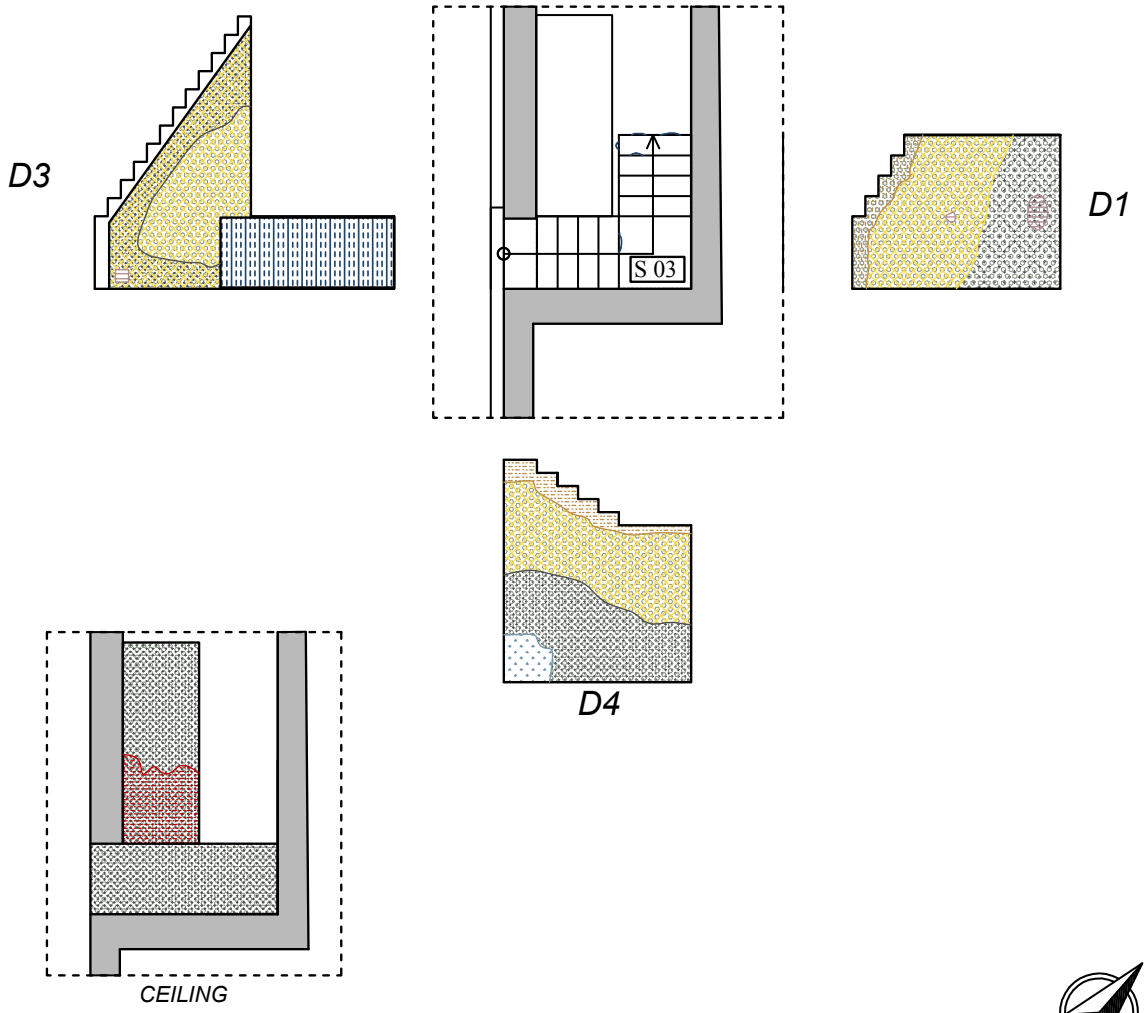
CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION	
01 BLISTERING	08 FILM	16 CRACKING		17 PRESENCE OF VEGETATION	
02 PEELING	09 SPOT			18 ALGA	
03 LIGHT EROSION	10 LEACHING			ANTHROPOGENIC DEGRADATION	
04 EROSION	11 EFFLORESCENCE			19 ASHES DEPOSIT	
05 MISSING PART	12 RUST			20 MECHANICAL DAMAGE	
06 DEPOSIT	13 STAIN			21 PAINTING, GRAFFITI	
07 POWDERING	14 HUMIDITY				
	15 CORROSION				



0 1 2 3 4 5 m

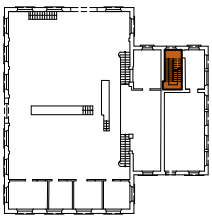
STAIRCASE S03

D18

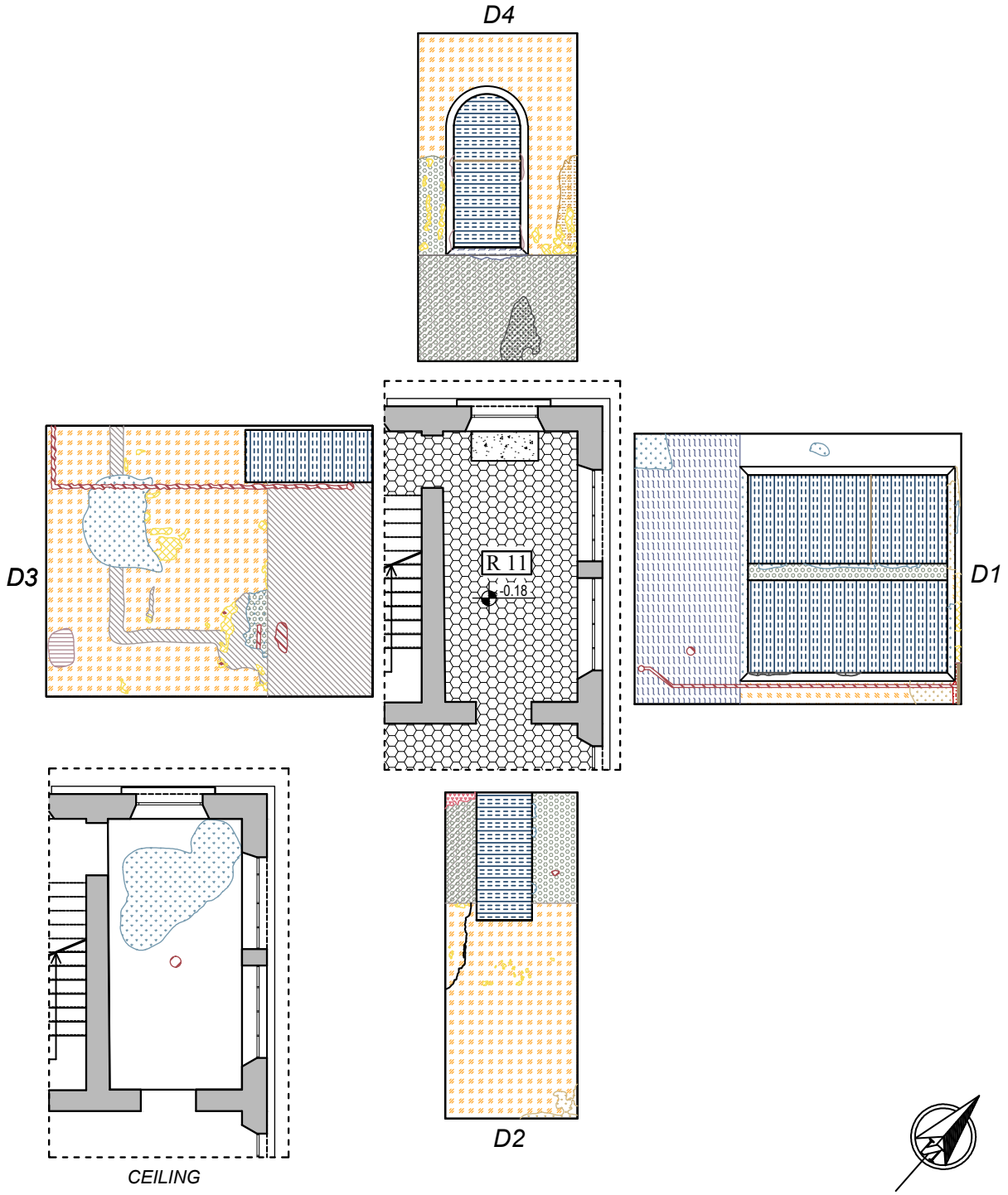


LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION		ANTHROPOGENIC DEGRADATION	
01 BLISTERING		08 FILM		16 CRACKING		19 ASHES DEPOSIT	
02 PEELING		09 SPOT		17 PRESENCE OF VEGETATION		20 MECHANICAL DAMAGE	
03 LIGHT EROSION		10 LEACHING		18 ALGA		21 PAINTING, GRAFFITI	
04 EROSION		11 EFFLORESCENCE					
05 MISSING PART		12 RUST					
06 DEPOSIT		13 STAIN					
07 POWDERING		14 HUMIDITY					
		15 CORROSION					

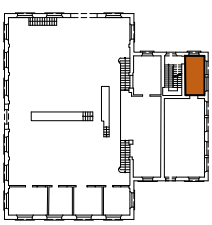


0 1 2 3 4 5 m



LEGEND OF DEGRADATION

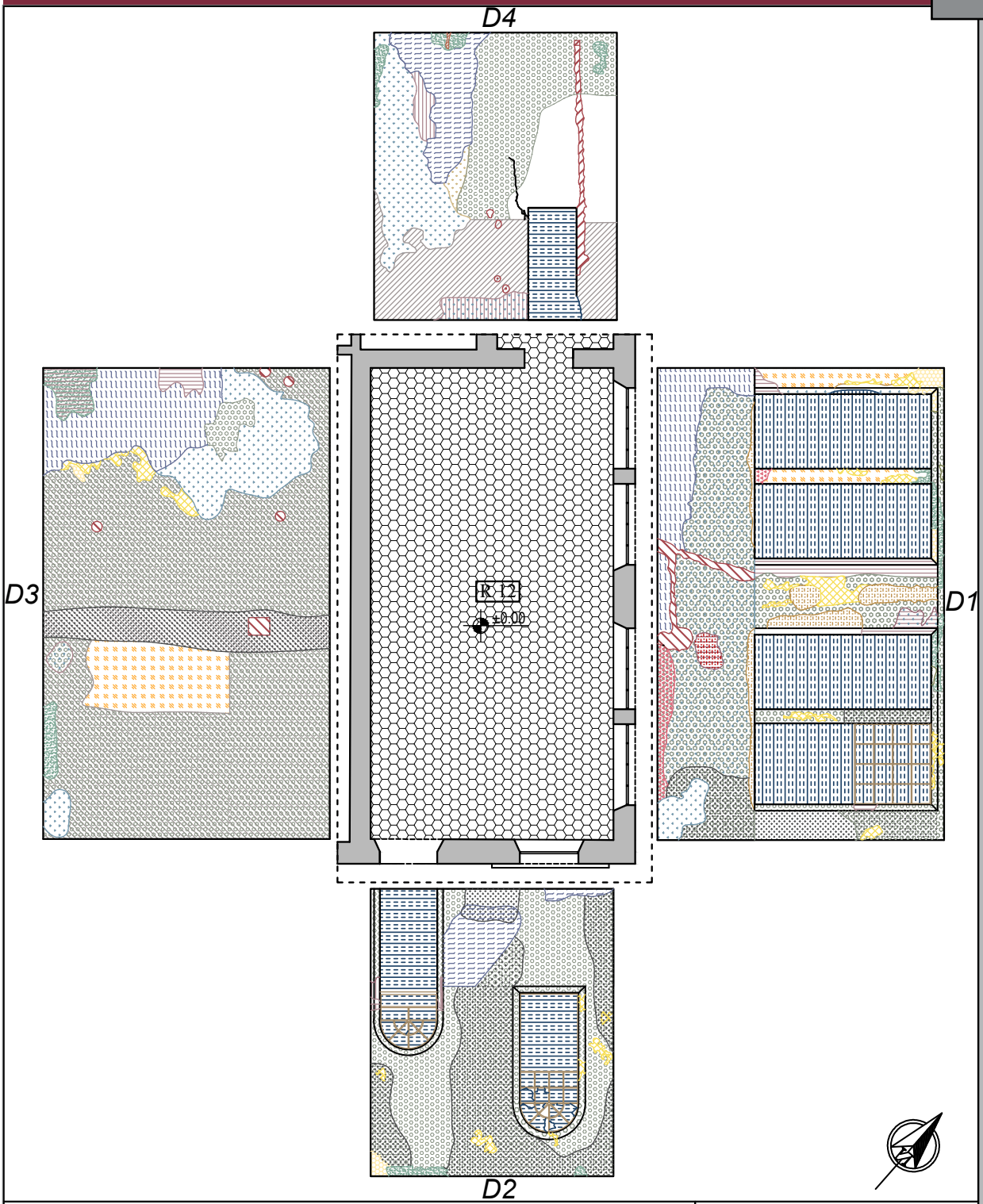
CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION	
01 BLISTERING	08 FILM	15 CORROSION	16 CRACKING	17 PRESENCE OF VEGETATION	19 ASHES DEPOSIT
02 PEELING	09 SPOT			18 ALGA	20 MECHANICAL DAMAGE
03 LIGHT EROSION	10 LEACHING			ANTHROPOGENIC DEGRADATION	21 PAINTING, GRAFFITI
04 EROSION	11 EFFLORESCENCE				
05 MISSING PART	12 RUST				
06 DEPOSIT	13 STAIN				
07 POWDERING	14 HUMIDITY				



0 1 2 3 4 5 m

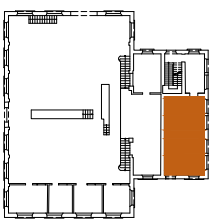
ROOM 12

D20



LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION					
01 BLISTERING	08 FILM	16 CRACKING
02 PEELING	09 SPOT	BIOLOGICAL DEGRADATION
03 LIGHT EROSION	10 LEACHING	17 PRESENCE OF VEGETATION
04 EROSION	11 EFFLORESCENCE	18 ALGA
05 MISSING PART	12 RUST	ANTHROPOGENIC DEGRADATION
06 DEPOSIT	13 STAIN	19 ASHES DEPOSIT
07 POWDERING	14 HUMIDITY	20 MECHANICAL DAMAGE
	15 CORROSION	21 PAINTING, GRAFFITI

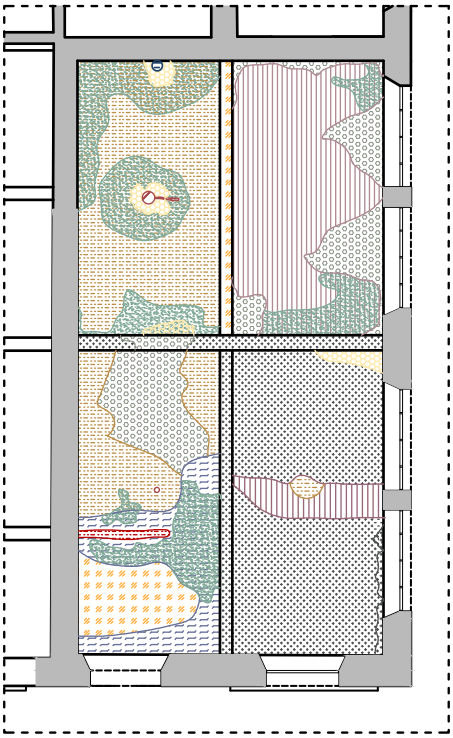


0 1 2 3 4 5 m

ROOM 12 CEILING

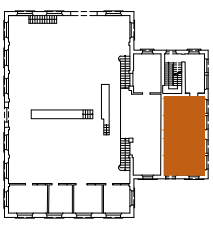
D21

DECAY LIST



LEGEND OF DEGRADATION

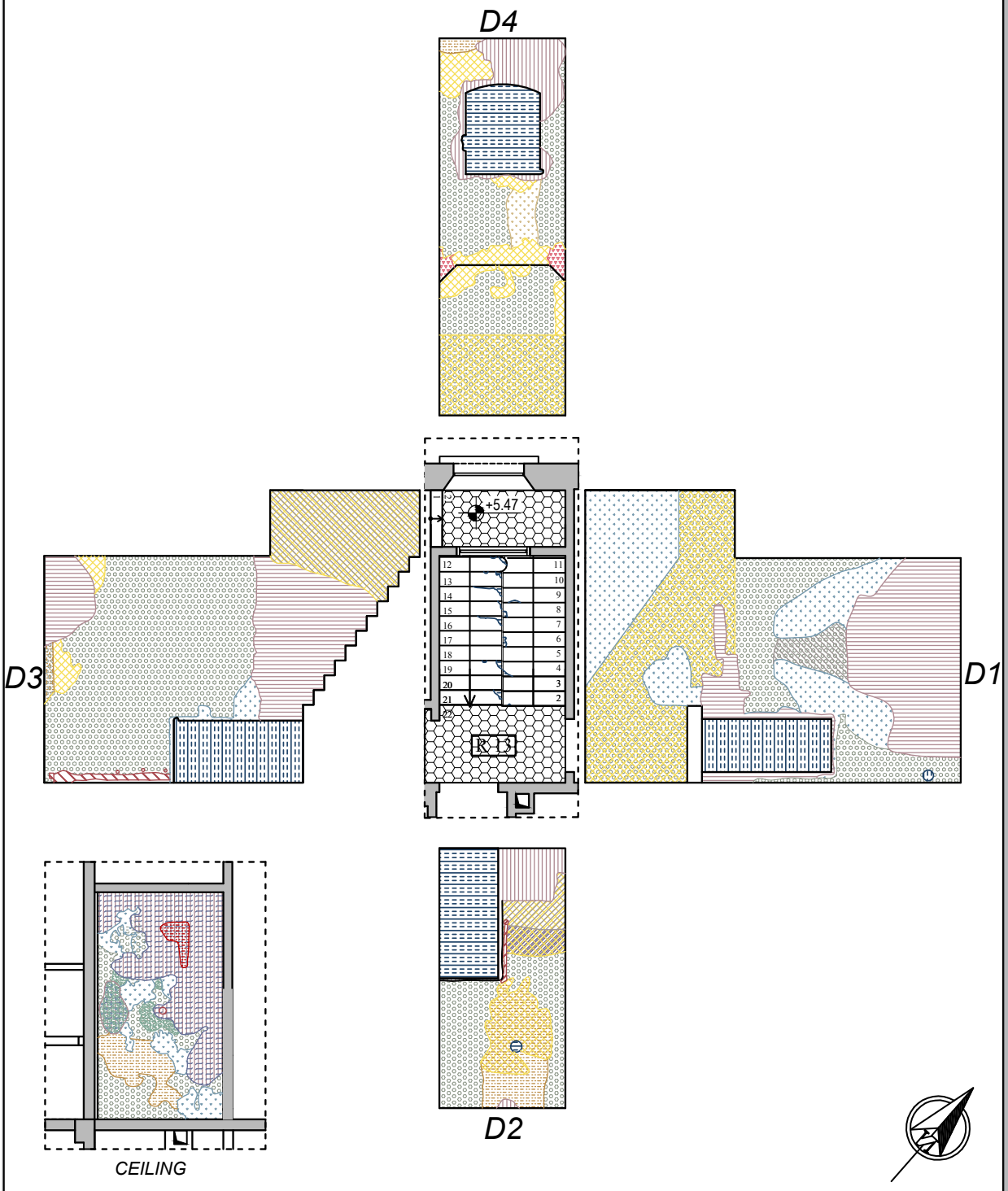
CHEMICAL AND PHYSICAL DEGRADATION					
01 BLISTERING	08 FILM	16 CRACKING
02 PEELING	09 SPOT	***BIOLOGICAL DEGRADATION***
03 LIGHT EROSION	10 LEACHING	17 PRESENCE OF VEGETATION
04 EROSION	11 EFFLORESCENCE	18 ALGA
05 MISSING PART	12 RUST	***ANTHROPOGENIC DEGRADATION***
06 DEPOSIT	13 STAIN	19 ASHES DEPOSIT
07 POWDERING	14 HUMIDITY	20 MECHANICAL DAMAGE
	15 CORROSION	21 PAINTING, GRAFFITI



0 1 2 3 4 5 m

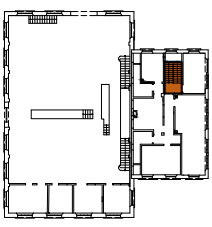
ROOM 13

D22



LEGEND OF DEGRADATION

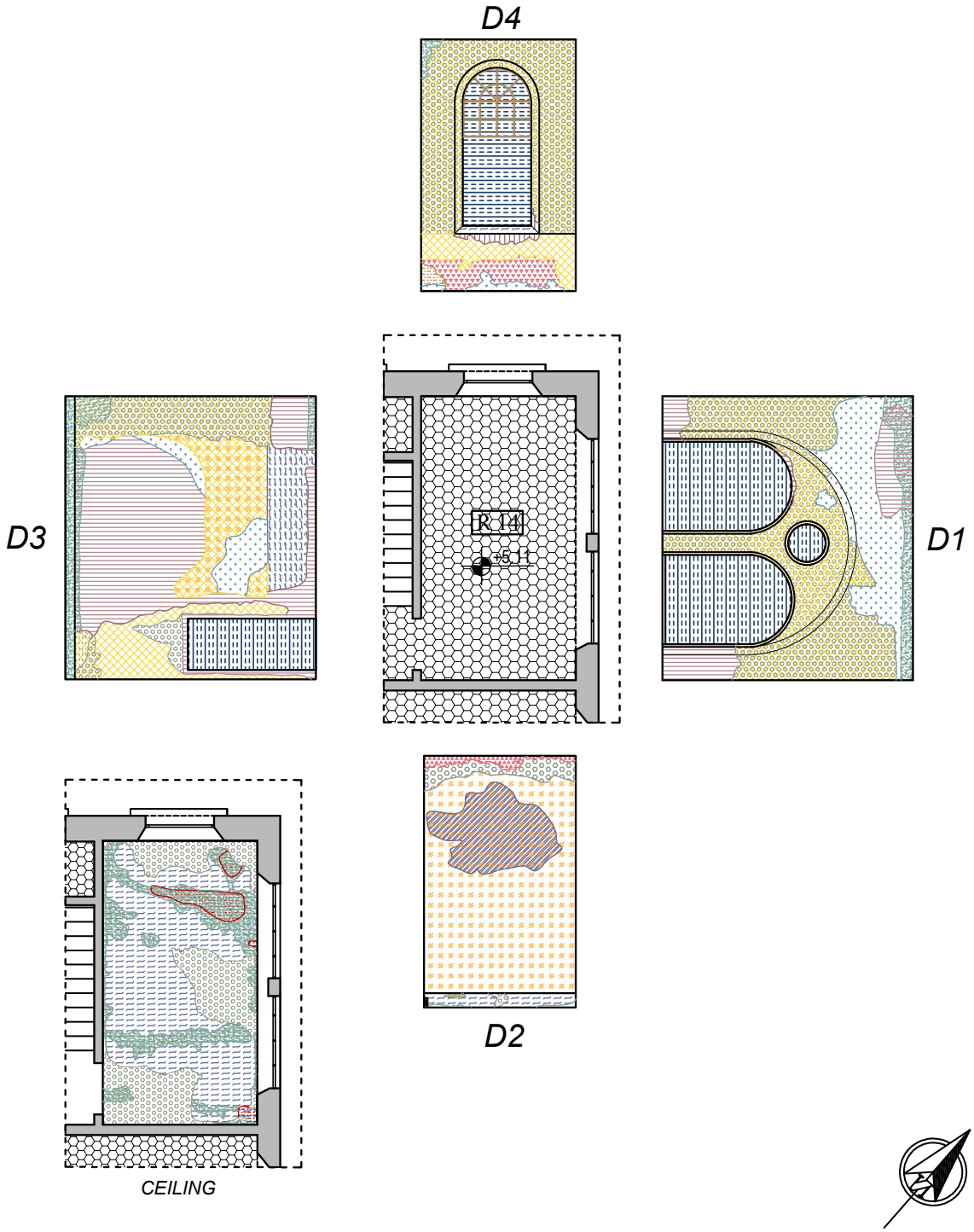
CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION		ANTHROPOGENIC DEGRADATION	
01 BLISTERING		08 FILM		16 CRACKING		17 PRESENCE OF VEGETATION	
02 PEELING		09 SPOT				18 ALGA	
03 LIGHT EROSION		10 LEACHING				19 ASHES DEPOSIT	
04 EROSION		11 EFFLORESCENCE				20 MECHANICAL DAMAGE	
05 MISSING PART		12 RUST				21 PAINTING, GRAFFITI	
06 DEPOSIT		13 STAIN					
07 POWDERING		14 HUMIDITY					
		15 CORROSION					



0 1 2 3 4 5 m

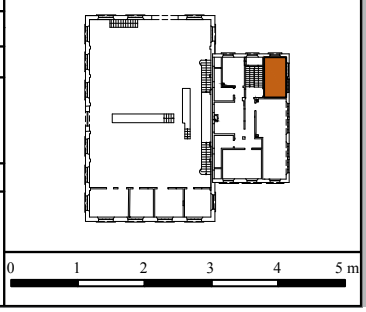
ROOM 14

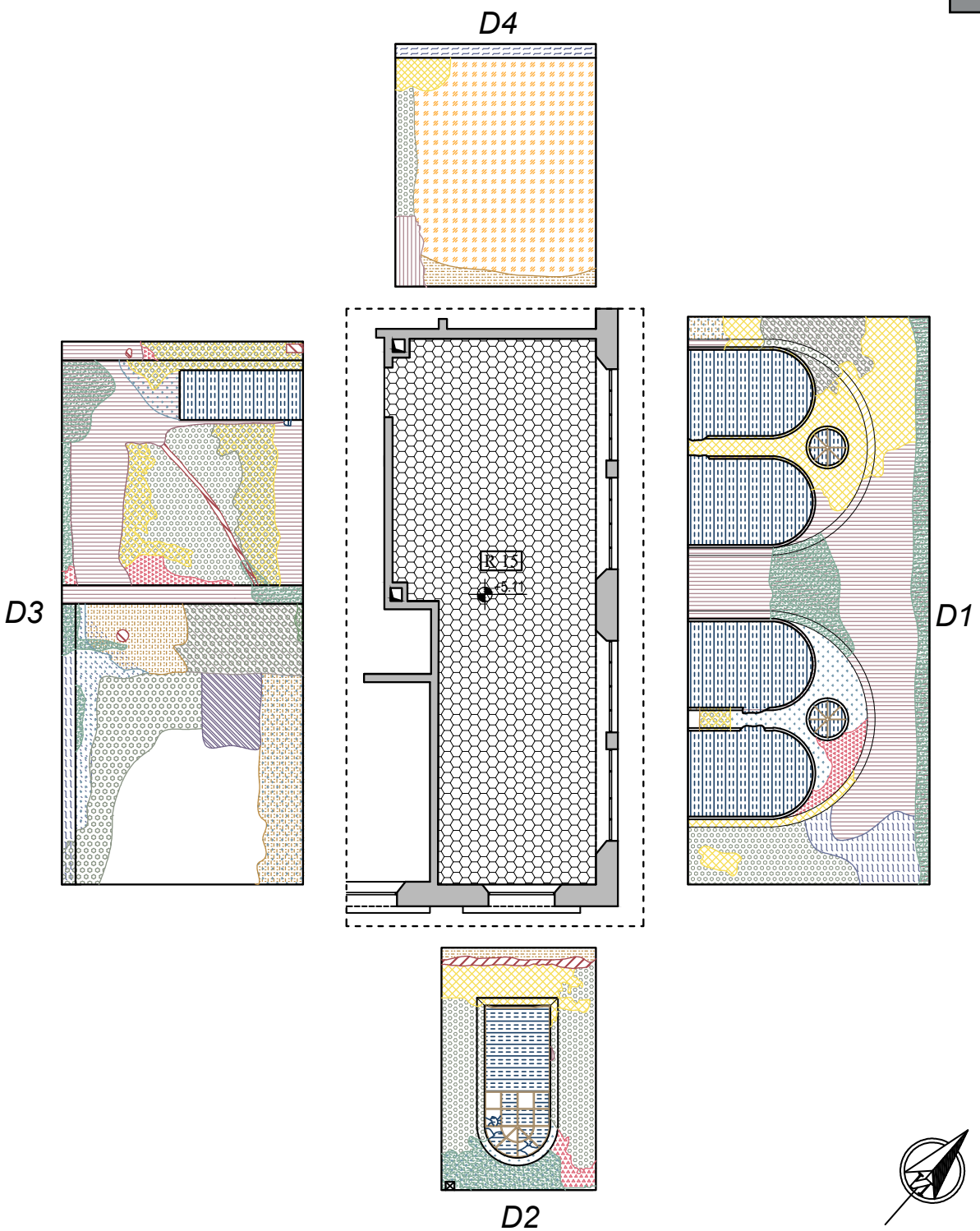
D23



LEGEND OF DEGRADATION

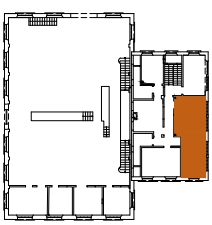
CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION	
01 BLISTERING	08 FILM	16 CRACKING		17 PRESENCE OF VEGETATION	
02 PEELING	09 SPOT			18 ALGA	
03 LIGHT EROSION	10 LEACHING			ANTHROPOGENIC DEGRADATION	
04 EROSION	11 EFFLORESCENCE			19 ASHES DEPOSIT	
05 MISSING PART	12 RUST			20 MECHANICAL DAMAGE	
06 DEPOSIT	13 STAIN			21 PAINTING, GRAFFITI	
07 POWDERING	14 HUMIDITY				
	15 CORROSION				





LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION	
01 BLISTERING	08 FILM	16 CRACKING		17 PRESENCE OF VEGETATION	
02 PEELING	09 SPOT			18 ALGA	
03 LIGHT EROSION	10 LEACHING			ANTHROPOGENIC DEGRADATION	
04 EROSION	11 EFFLORESCENCE			19 ASHES DEPOSIT	
05 MISSING PART	12 RUST			20 MECHANICAL DAMAGE	
06 DEPOSIT	13 STAIN			21 PAINTING, GRAFFITI	
07 POWDERING	14 HUMIDITY				
	15 CORROSION				

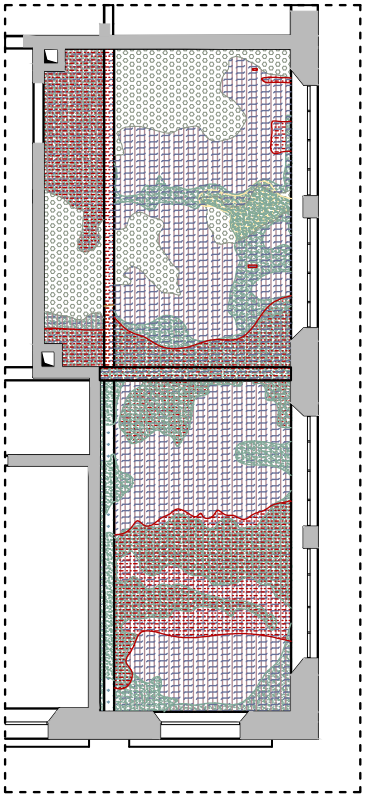


0 1 2 3 4 5 m

ROOM 15 CEILING

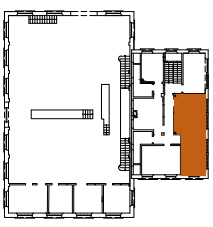
D25

DECAY LIST

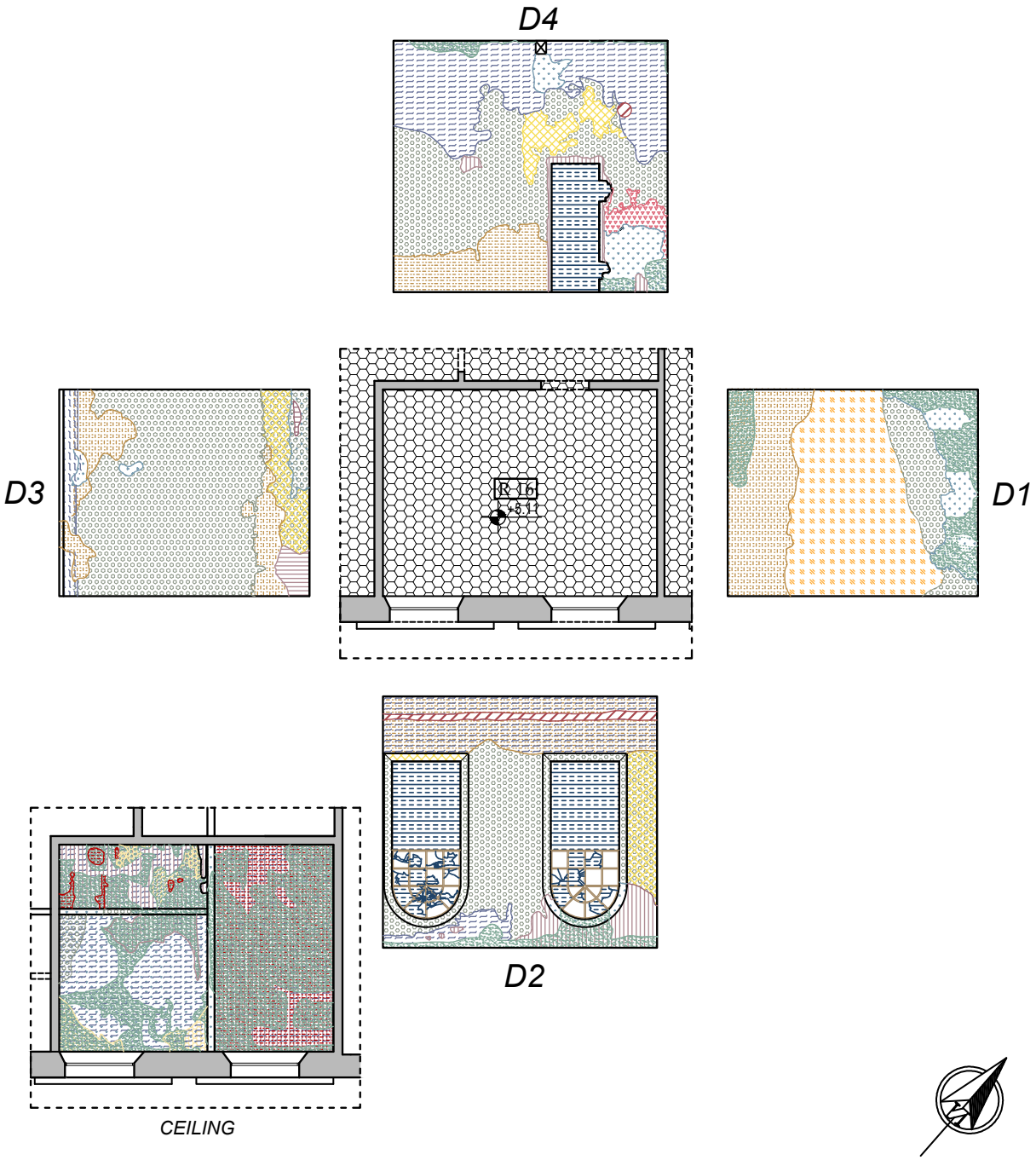


LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION					
01 BLISTERING	08 FILM	16 CRACKING
02 PEELING	09 SPOT	BIOLOGICAL DEGRADATION
03 LIGHT EROSION	10 LEACHING	17 PRESENCE OF VEGETATION
04 EROSION	11 EFFLORESCENCE	18 ALGA
05 MISSING PART	12 RUST	ANTHROPOGENIC DEGRADATION
06 DEPOSIT	13 STAIN	19 ASHES DEPOSIT
07 POWDERING	14 HUMIDITY	20 MECHANICAL DAMAGE
	15 CORROSION	21 PAINTING, GRAFFITI

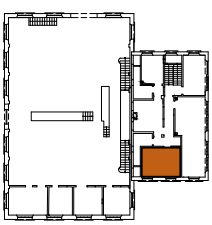


0 1 2 3 4 5 m



LEGEND OF DEGRADATION

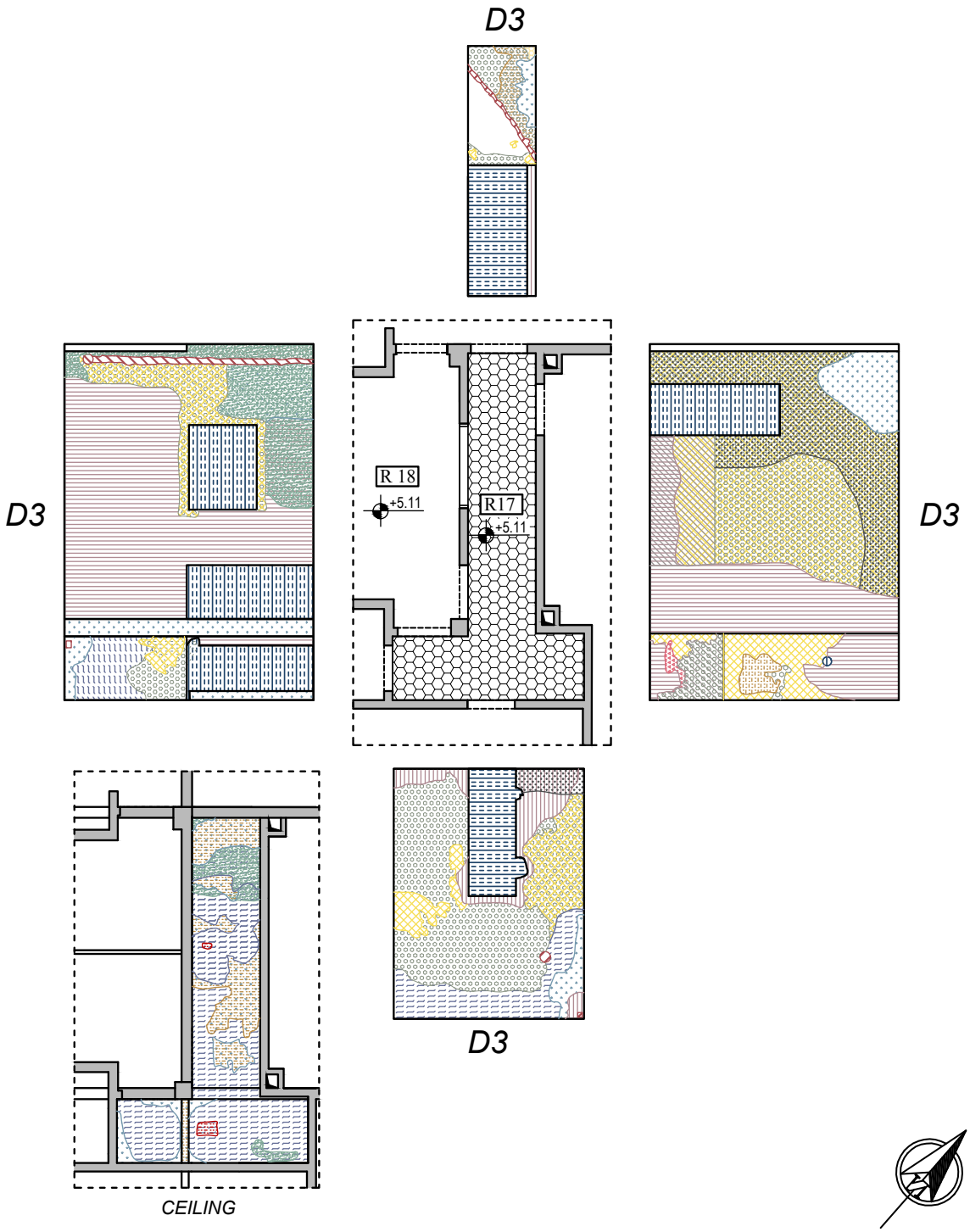
CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION		ANTHROPOGENIC DEGRADATION	
01 BLISTERING		08 FILM		16 CRACKING			
02 PEELING		09 SPOT				17 PRESENCE OF VEGETATION	
03 LIGHT EROSION		10 LEACHING				18 ALGA	
04 EROSION		11 EFFLORESCENCE				19 ASHES DEPOSIT	
05 MISSING PART		12 RUST				20 MECHANICAL DAMAGE	
06 DEPOSIT		13 STAIN				21 PAINTING, GRAFFITI	
07 POWDERING		14 HUMIDITY					
		15 CORROSION					



0 1 2 3 4 5 m

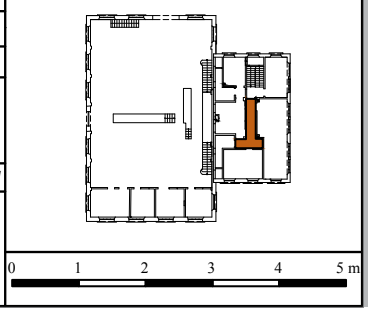
ROOM 17

D27



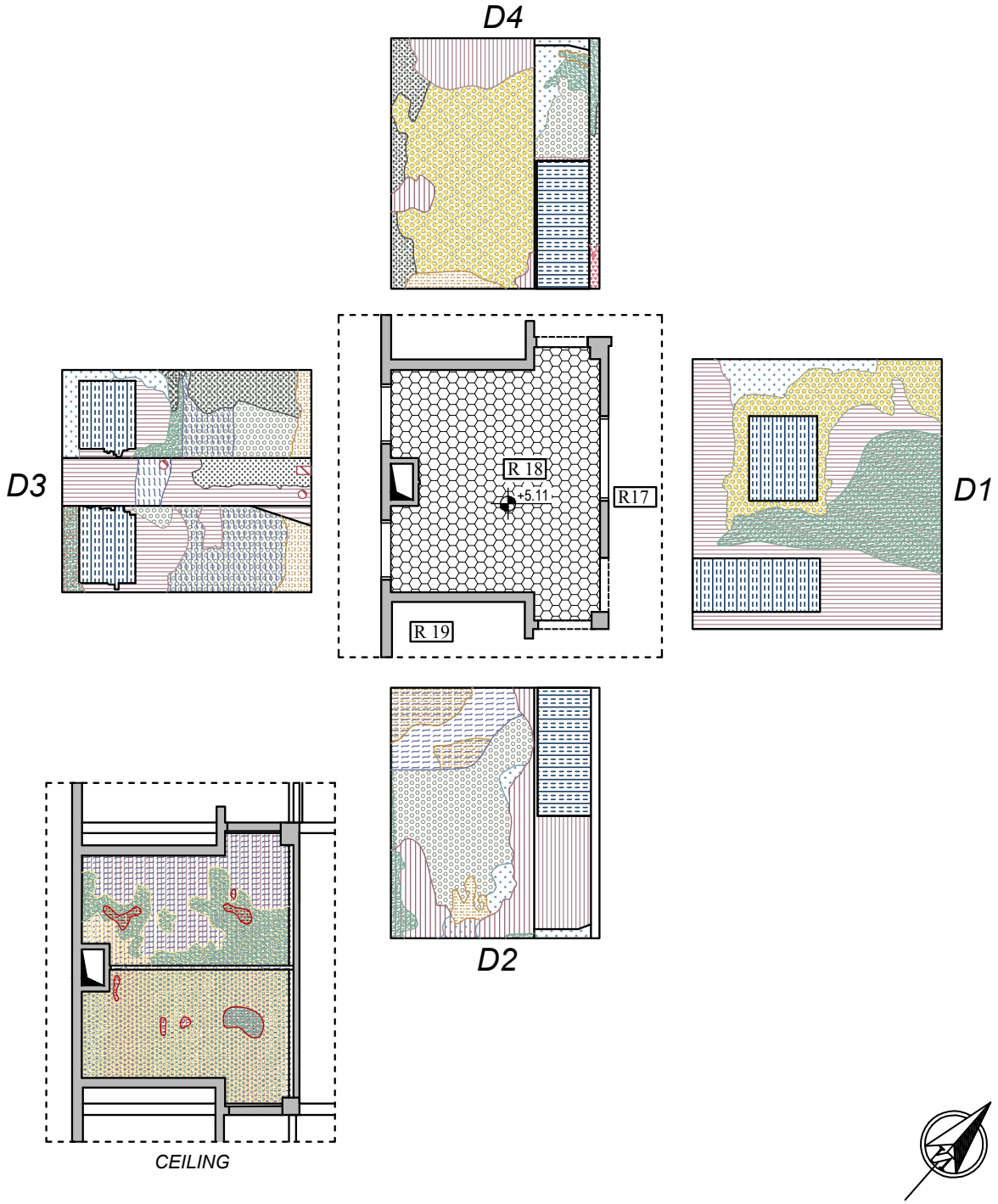
LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION					
01 BLISTERING	08 FILM	16 CRACKING
02 PEELING	09 SPOT	BIOLOGICAL DEGRADATION
03 LIGHT EROSION	10 LEACHING	17 PRESENCE OF VEGETATION
04 EROSION	11 EFFLORESCENCE	18 ALGA
05 MISSING PART	12 RUST	ANTHROPOGENIC DEGRADATION
06 DEPOSIT	13 STAIN	19 ASHES DEPOSIT
07 POWDERING	14 HUMIDITY	20 MECHANICAL DAMAGE
	15 CORROSION	21 PAINTING, GRAFFITI



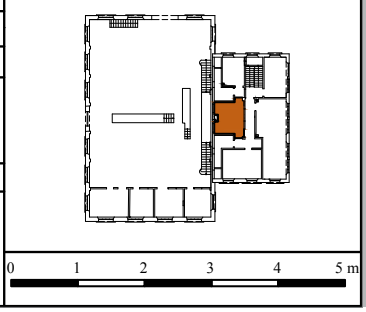
ROOM 18

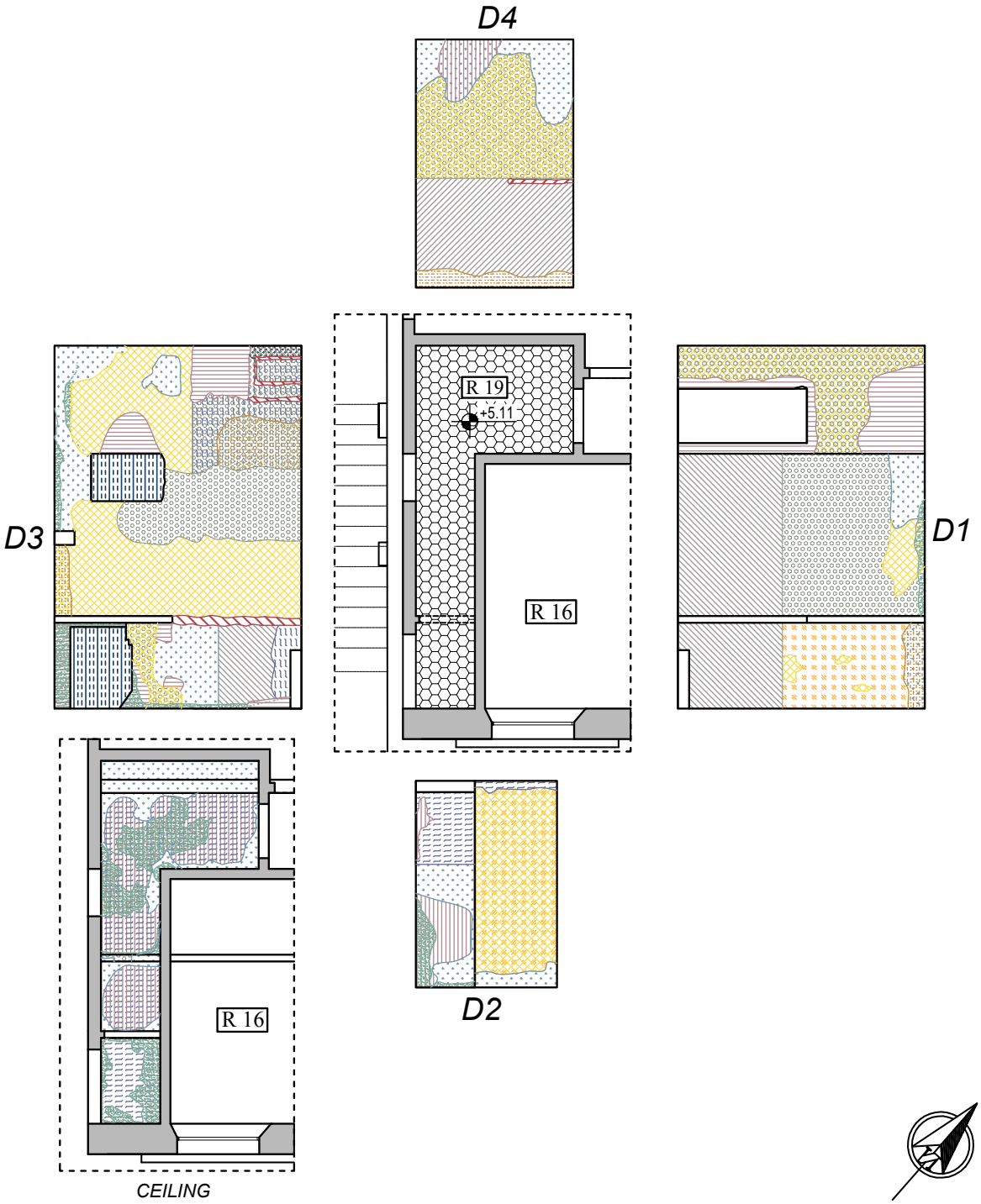
D28



LEGEND OF DEGRADATION

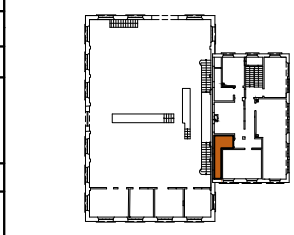
CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION		ANTHROPOGENIC DEGRADATION	
01 BLISTERING	08 FILM	15 CORROSION	16 CRACKING	17 PRESENCE OF VEGETATION		19 ASHES DEPOSIT	
02 PEELING	09 SPOT			18 ALGA		20 MECHANICAL DAMAGE	
03 LIGHT EROSION	10 LEACHING					21 PAINTING, GRAFFITI	
04 EROSION	11 EFFLORESCENCE						
05 MISSING PART	12 RUST						
06 DEPOSIT	13 STAIN						
07 POWDERING	14 HUMIDITY						



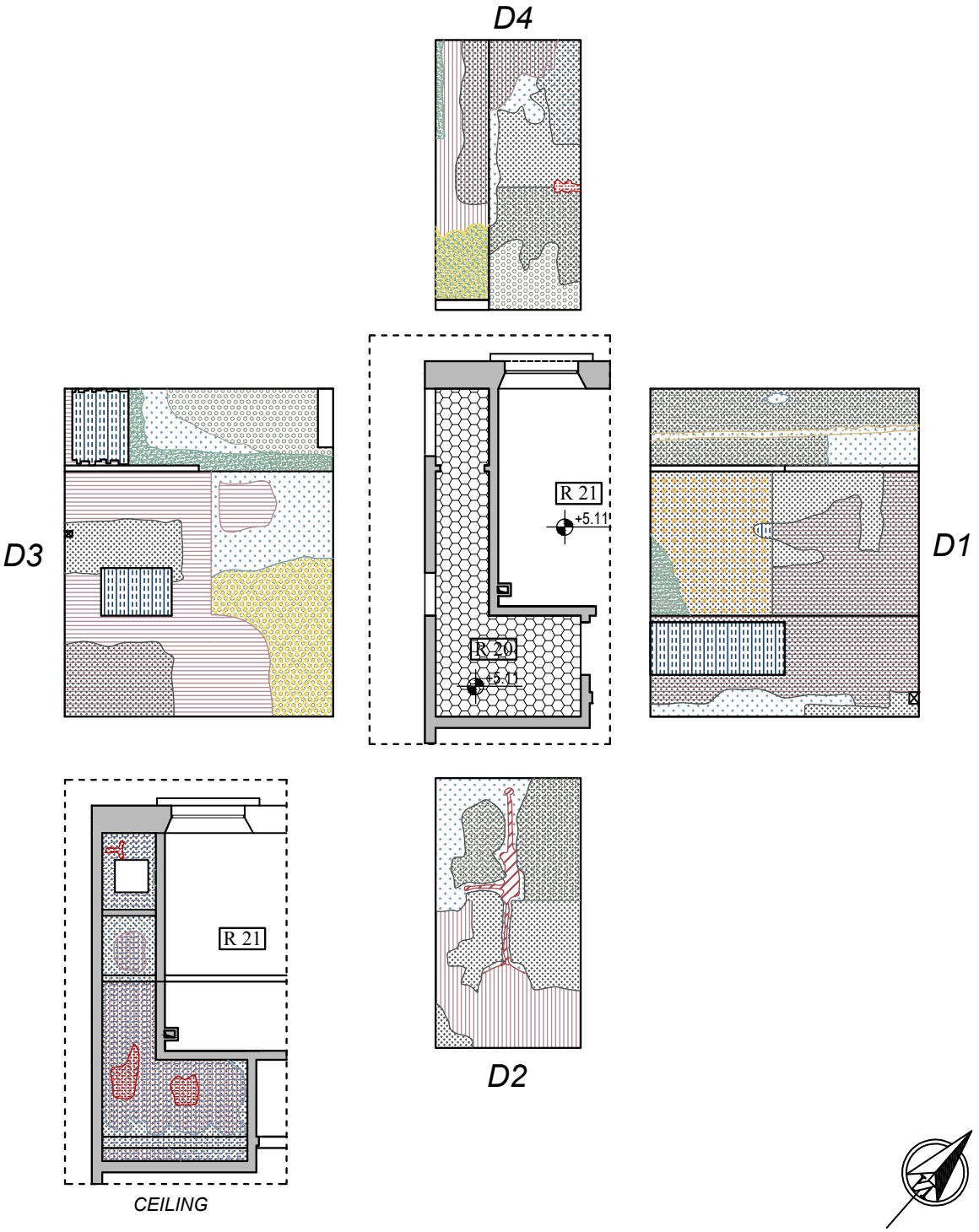


LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION		ANTHROPOGENIC DEGRADATION	
01 BLISTERING	08 FILM	15 CORROSION	16 CRACKING	17 PRESENCE OF VEGETATION	18 ALGA	19 ASHES DEPOSIT	20 IMPACT DAMAGE
02 PEELING	09 SPOT						
03 LACK OF MATERIAL	10 LEACHING						
04 EROSION	11 EFFLORESCENCE						
05 MISSING PART	12 RUST						
06 PATINA	13 STAIN						
07 POWDERING	14 HUMIDITY					21 PAINTING, GRAFFITI	

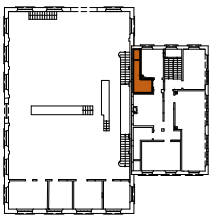


0 1 2 3 4 5 m



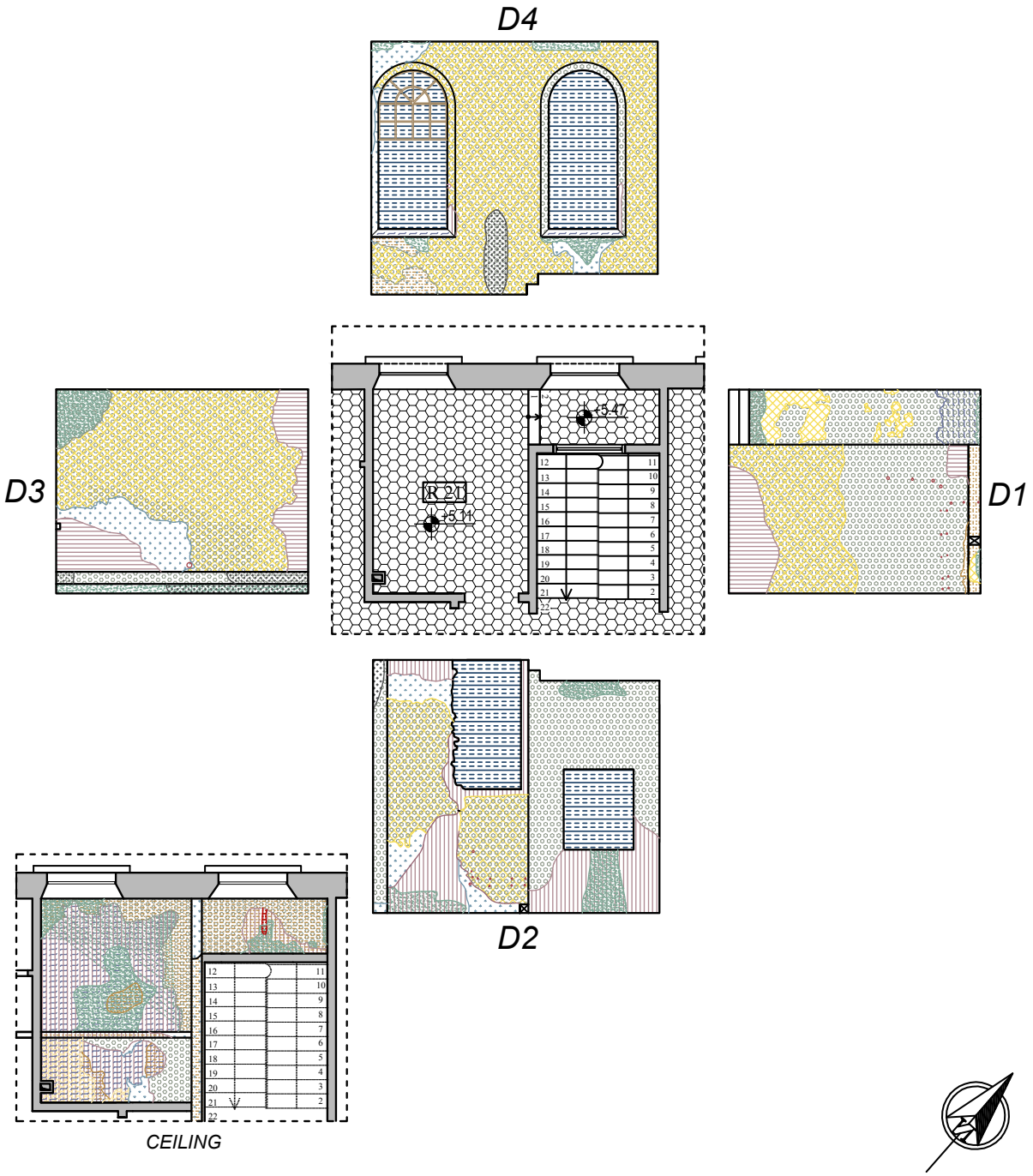
LEGEND OF DEGRADATION

CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION	
01 BLISTERING	08 FILM	16 CRACKING		17 PRESENCE OF VEGETATION	
02 PEELING	09 SPOT			18 ALGA	
03 LIGHT EROSION	10 LEACHING			ANTHROPOGENIC DEGRADATION	
04 EROSION	11 EFFLORESCENCE			19 ASHES DEPOSIT	
05 MISSING PART	12 RUST			20 MECHANICAL DAMAGE	
06 DEPOSIT	13 STAIN			21 PAINTING, GRAFFITI	
07 POWDERING	14 HUMIDITY				
	15 CORROSION				



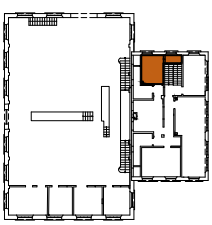
0 1 2 3 4 5 m

ROOM 21



LEGEND OF DEGRADATION

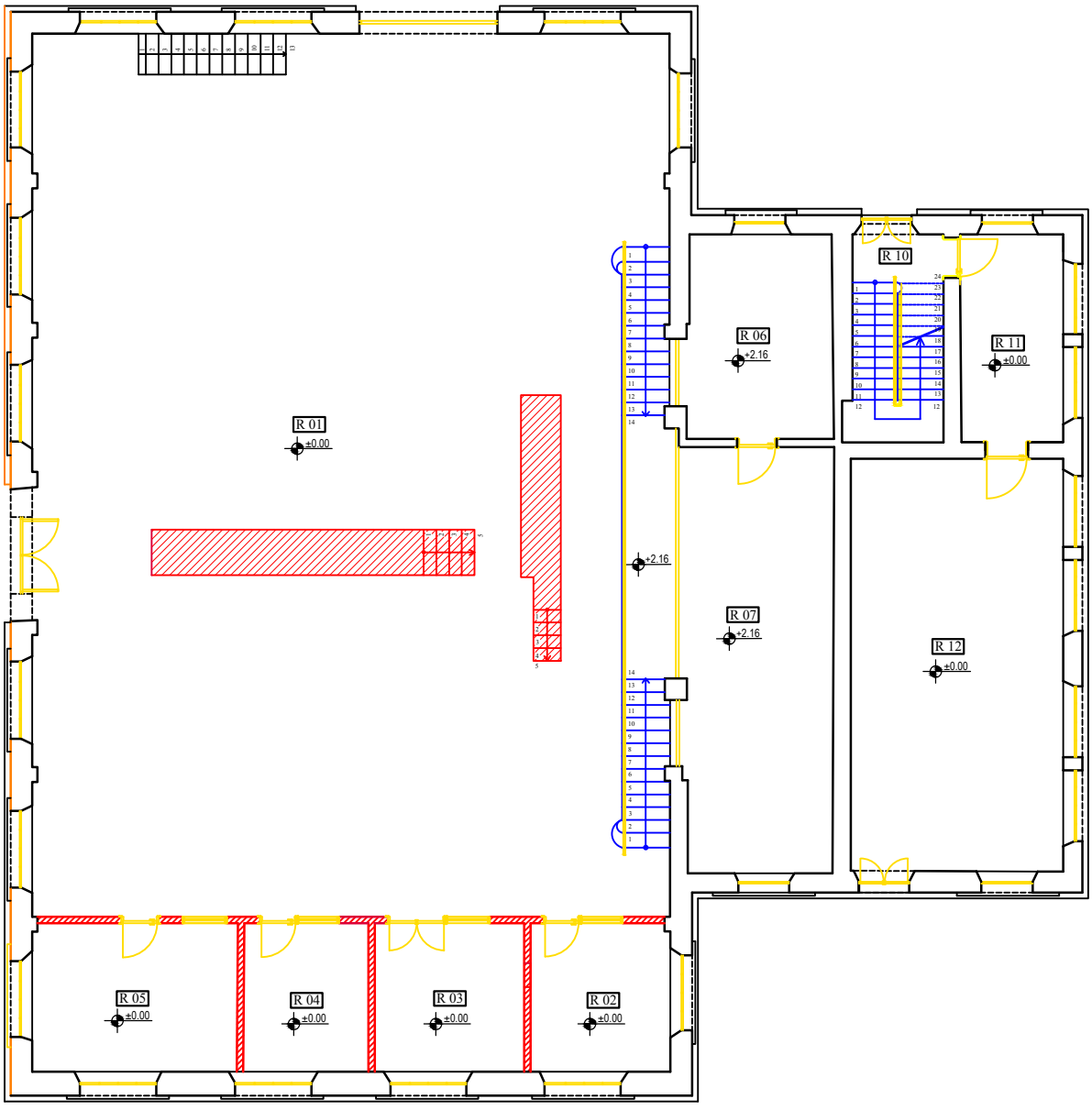
CHEMICAL AND PHYSICAL DEGRADATION				BIOLOGICAL DEGRADATION		ANTHROPOGENIC DEGRADATION	
01 BLISTERING		08 FILM		16 CRACKING		17 PRESENCE OF VEGETATION	
02 PEELING		09 SPOT				18 ALGA	
03 LIGHT EROSION		10 LEACHING				19 ASHES DEPOSIT	
04 EROSION		11 EFFLORESCENCE				20 MECHANICAL DAMAGE	
05 MISSING PART		12 RUST				21 PAINTING, GRAFFITI	
06 DEPOSIT		13 STAIN					
07 POWDERING		14 HUMIDITY					
		15 CORROSION					



0 1 2 3 4 5 m

GROUND FLOOR

A01



LEGEND OF ALTERATION

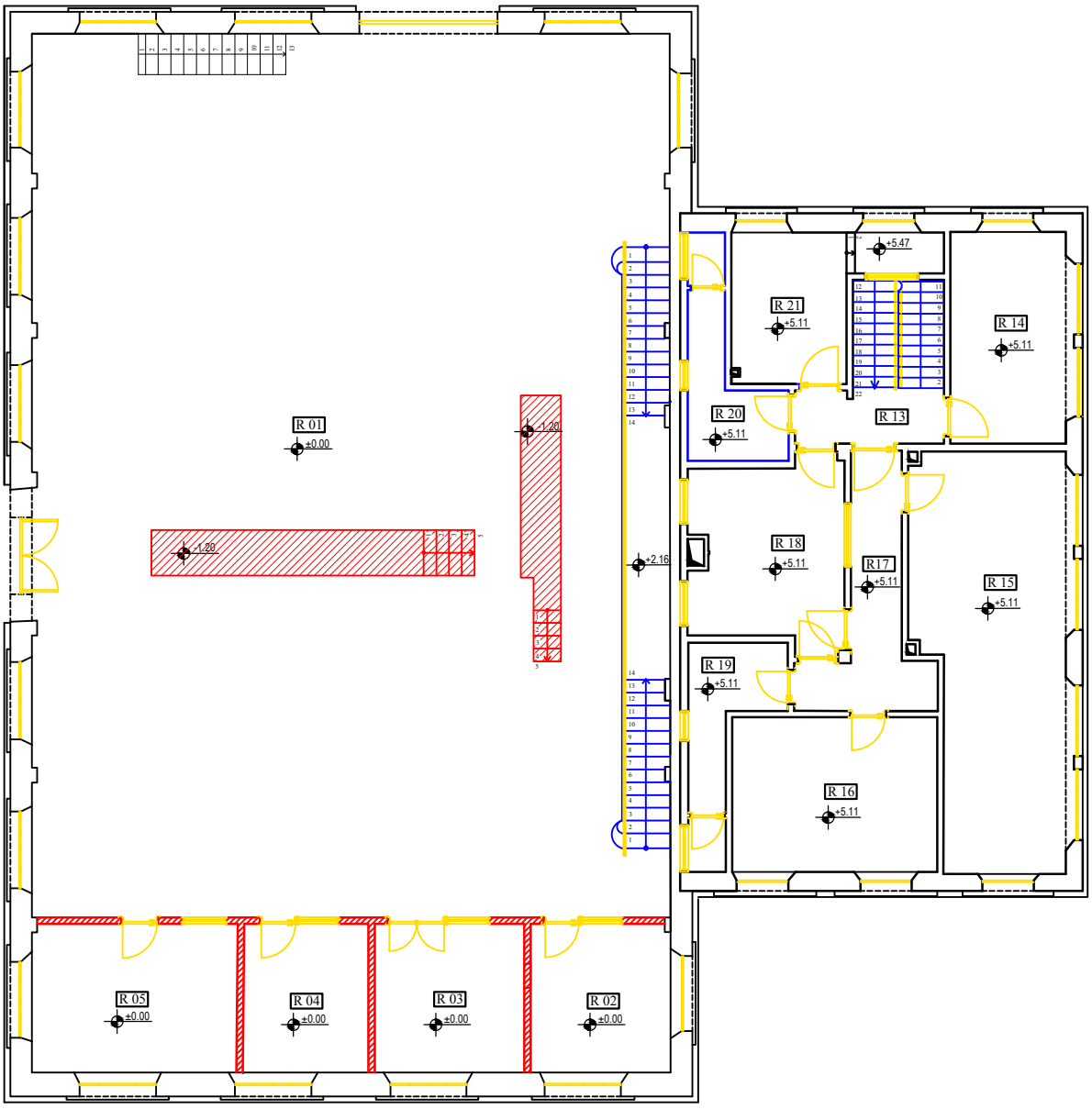
ORIGINAL ELEMENTS SURVIVING TODAY	HUMAN MADE INTERVENTIONS	CHANGES BY NATURE'S EFFECT
01 ORIGINAL ELEMENTS	02 ADDED ELEMENTS	05 LOSS OF MATERIALS
	03 REMOVED ELEMENTS	
	04 CHANGED ELEMENTS	

0 1 2 3 4 5 m

ALTERATION LIST

FIRST FLOOR

A02



LEGEND OF ALTERATION

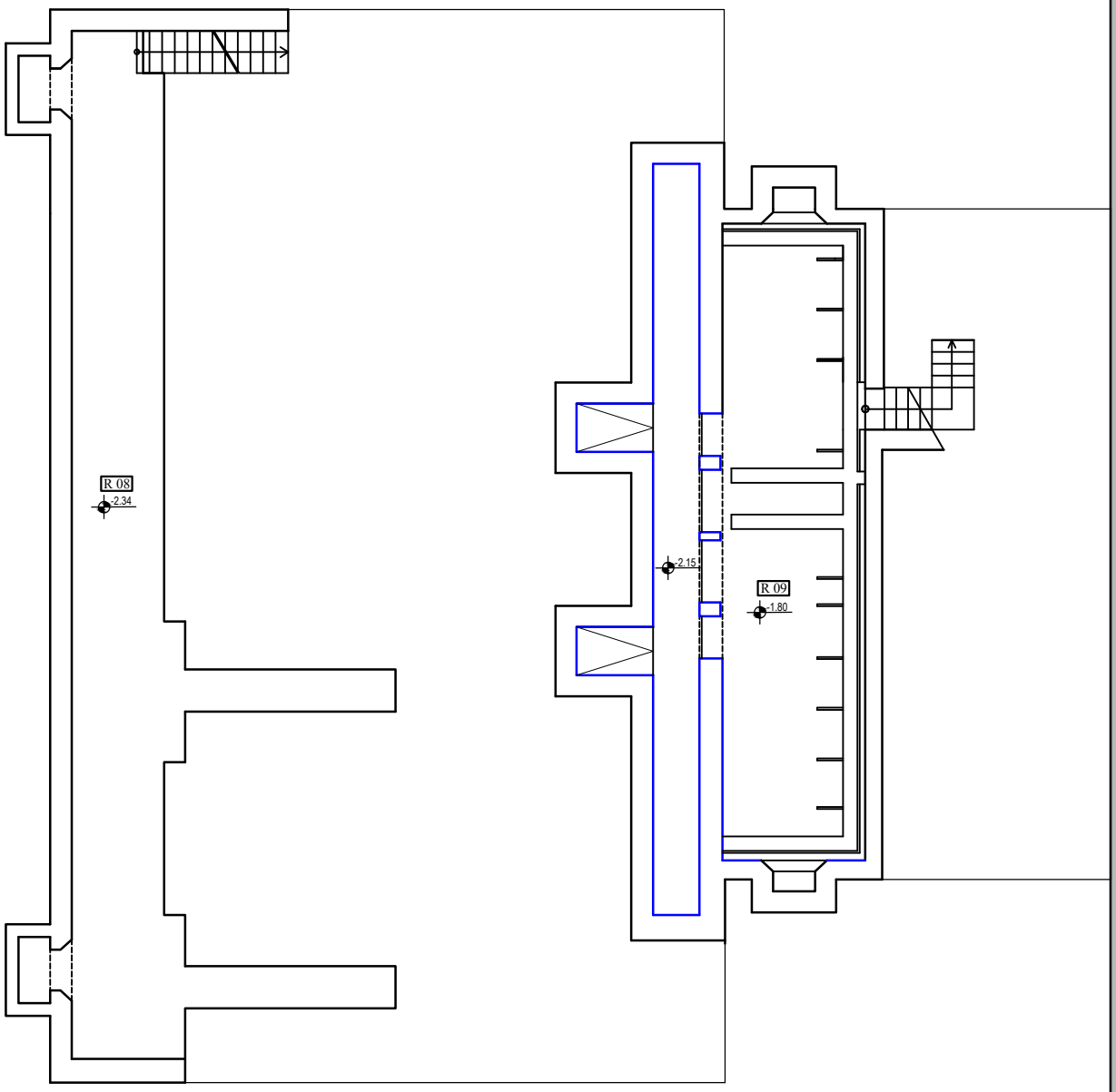
ORIGINAL ELEMENTS SURVIVING TODAY	HUMAN MADE INTERVENTIONS	CHANGES BY NATURE'S EFFECT
01 ORIGINAL ELEMENTS	02 ADDED ELEMENTS	05 LOSS OF MATERIALS
	03 REMOVED ELEMENTS	
	04 CHANGED ELEMENTS	

0 1 2 3 4 5 m

ALTERATION LIST

BASEMENT FLOOR

A03



ALTERATION LIST

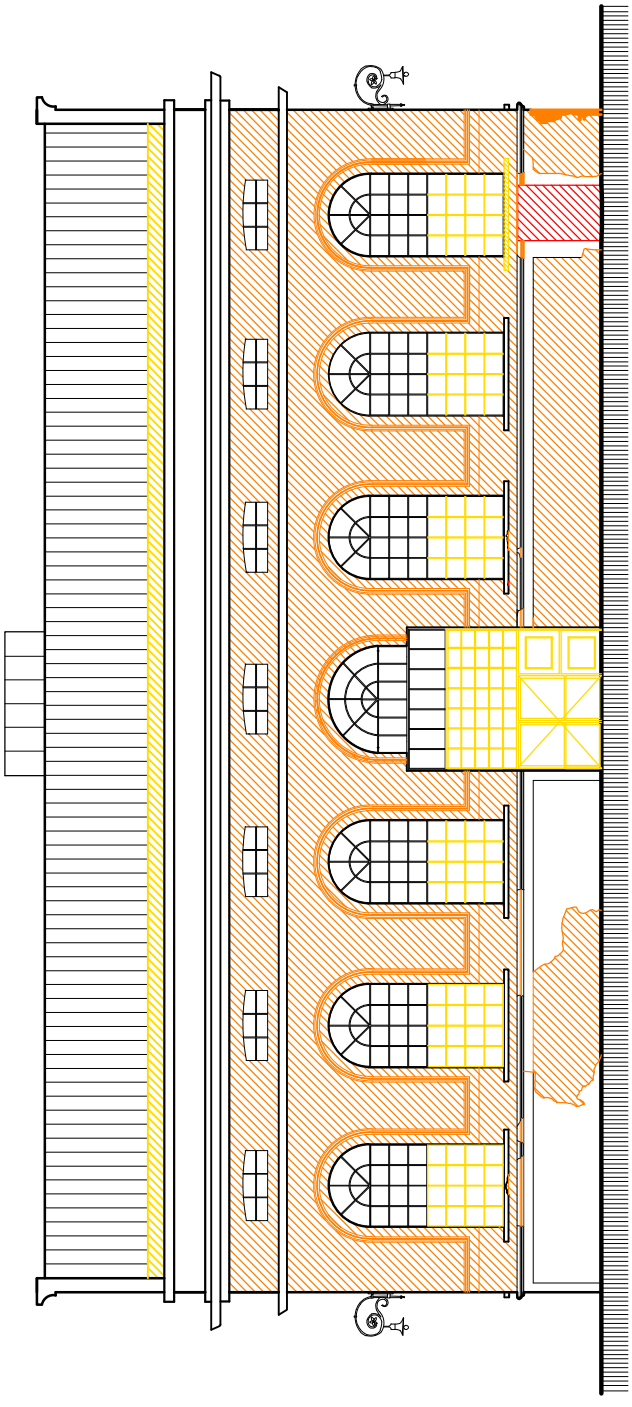
LEGEND OF ALTERATION

ORIGINAL ELEMENTS SURVIVING TODAY	HUMAN MADE INTERVENTIONS	CHANGES BY NATURE'S EFFECT
01 ORIGINAL ELEMENTS	02 ADDED ELEMENTS	05 LOSS OF MATERIALS
	03 REMOVED ELEMENTS	
	04 CHANGED ELEMENTS	

0 1 2 3 4 5 m

SOUTHWEST ELEVATION

A04



LEGEND OF ALTERATION

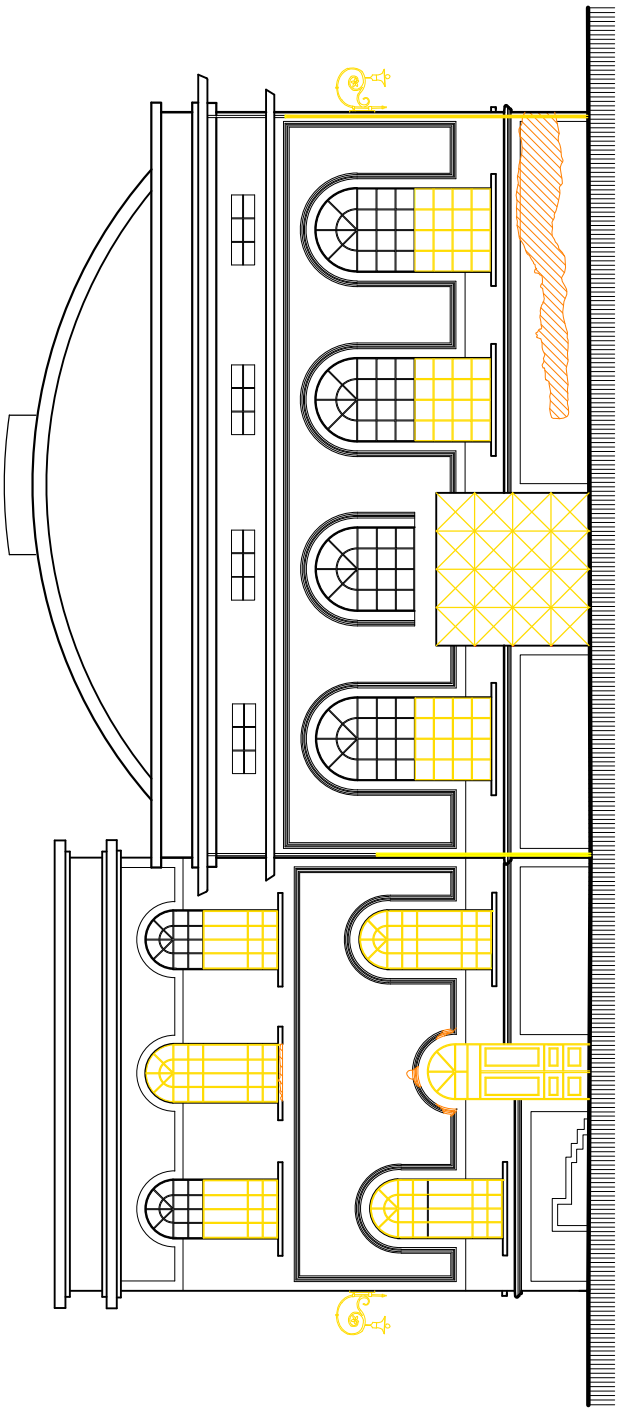
ORIGINAL ELEMENTS SURVIVING TODAY	*HUMAN MADE INTERVENTIONS*	*CHANGES BY NATURE'S EFFECT*
01 ORIGINAL ELEMENTS	02 ADDED ELEMENTS	05 LOSS OF MATERIALS
	03 REMOVED ELEMENTS	
	04 CHANGED ELEMENTS	

0 1 2 3 4 5 m

ALTERATION LIST

NORTHWEST ELEVATION

A05



ALTERATION LIST

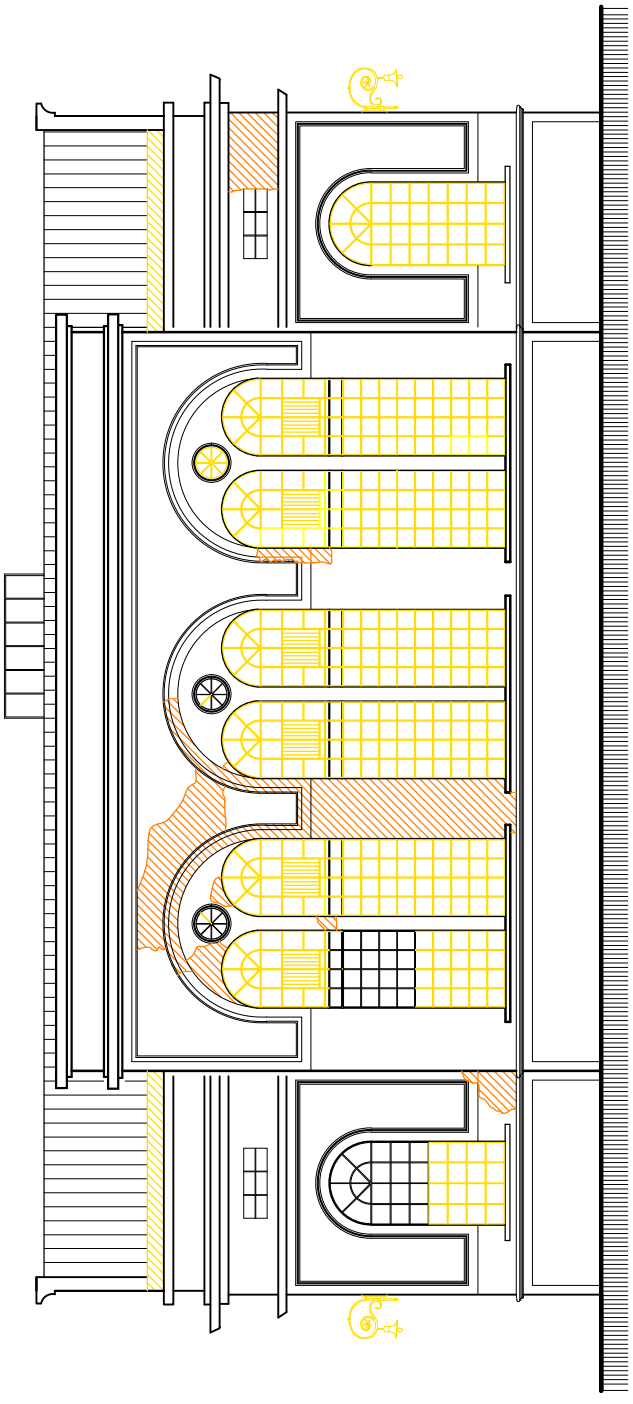
LEGEND OF ALTERATION

ORIGINAL ELEMENTS SURVIVING TODAY	*HUMAN MADE INTERVENTIONS*	*CHANGES BY NATURE'S EFFECT*
01 ORIGINAL ELEMENTS	02 ADDED ELEMENTS	05 LOSS OF MATERIALS
	03 REMOVED ELEMENTS	
	04 CHANGED ELEMENTS	

0 1 2 3 4 5 m

NORTHEAST ELEVATION

A06



ALTERATION LIST

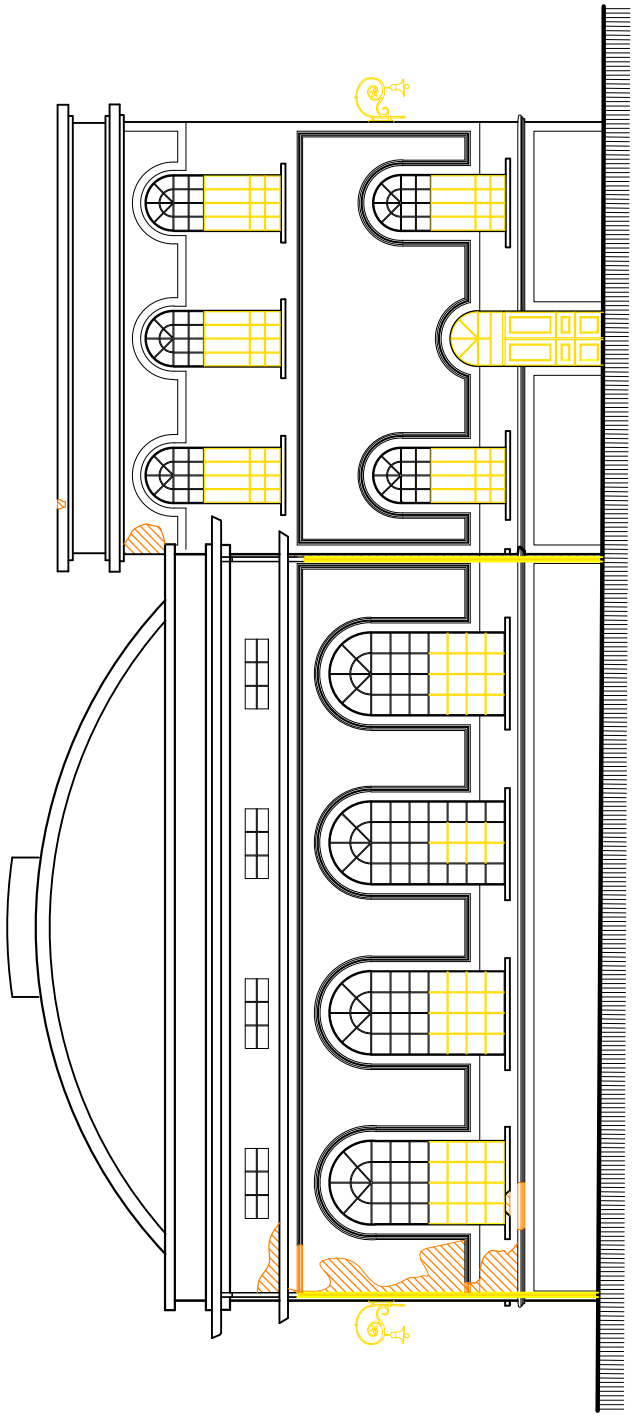
LEGEND OF ALTERATION

ORIGINAL ELEMENTS SURVIVING TODAY	*HUMAN MADE INTERVENTIONS*	*CHANGES BY NATURE'S EFFECT*
01 ORIGINAL ELEMENTS	02 ADDED ELEMENTS	05 LOSS OF MATERIALS
	03 REMOVED ELEMENTS	
	04 CHANGED ELEMENTS	

0 1 2 3 4 5 m

SOUTHEAST ELEVATION

A07



ALTERATION LIST

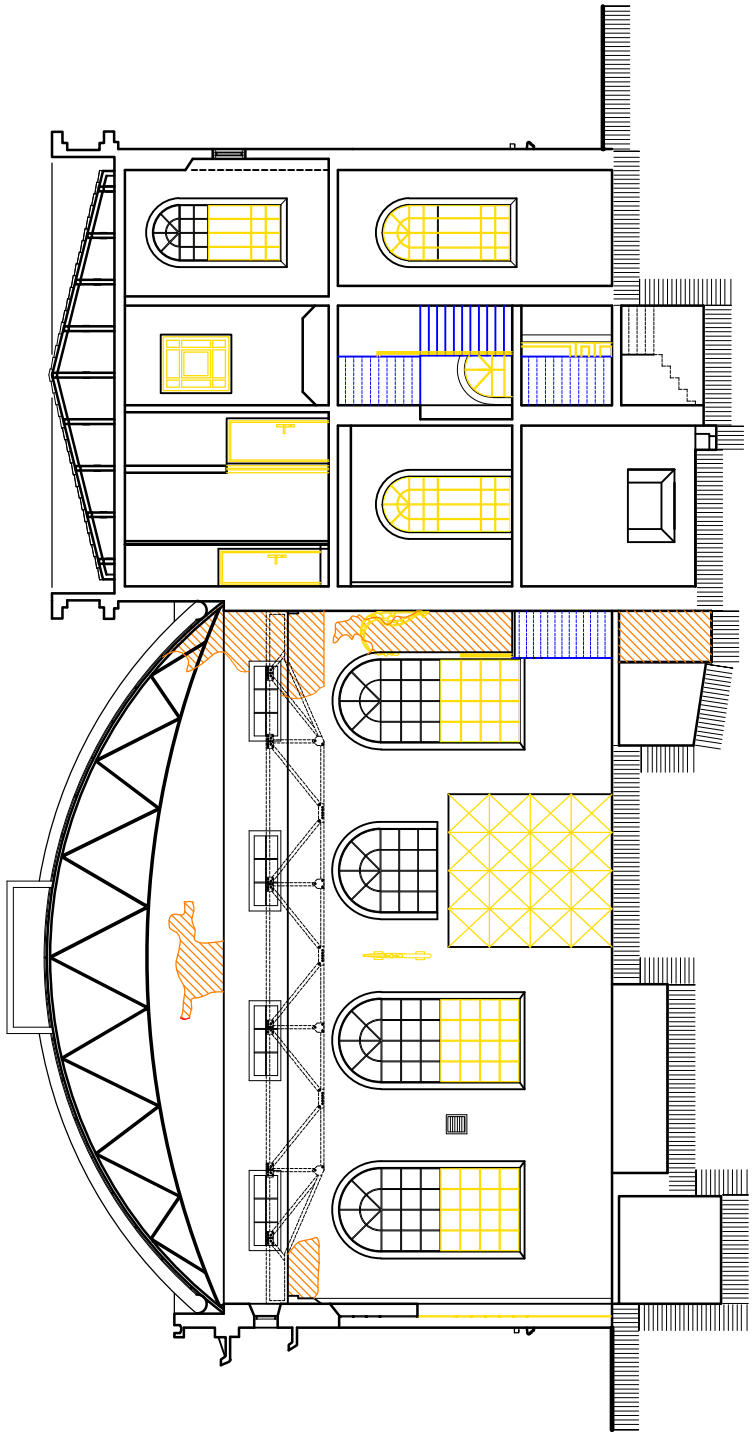
LEGEND OF ALTERATION

ORIGINAL ELEMENTS SURVIVING TODAY	HUMAN MADE INTERVENTIONS	CHANGES BY NATURE'S EFFECT
01 ORIGINAL ELEMENTS	02 ADDED ELEMENTS	05 LOSS OF MATERIALS
	03 REMOVED ELEMENTS	
	04 CHANGED ELEMENTS	

0 1 2 3 4 5 m

SECTION A-A

A08



LEGEND OF ALTERATION

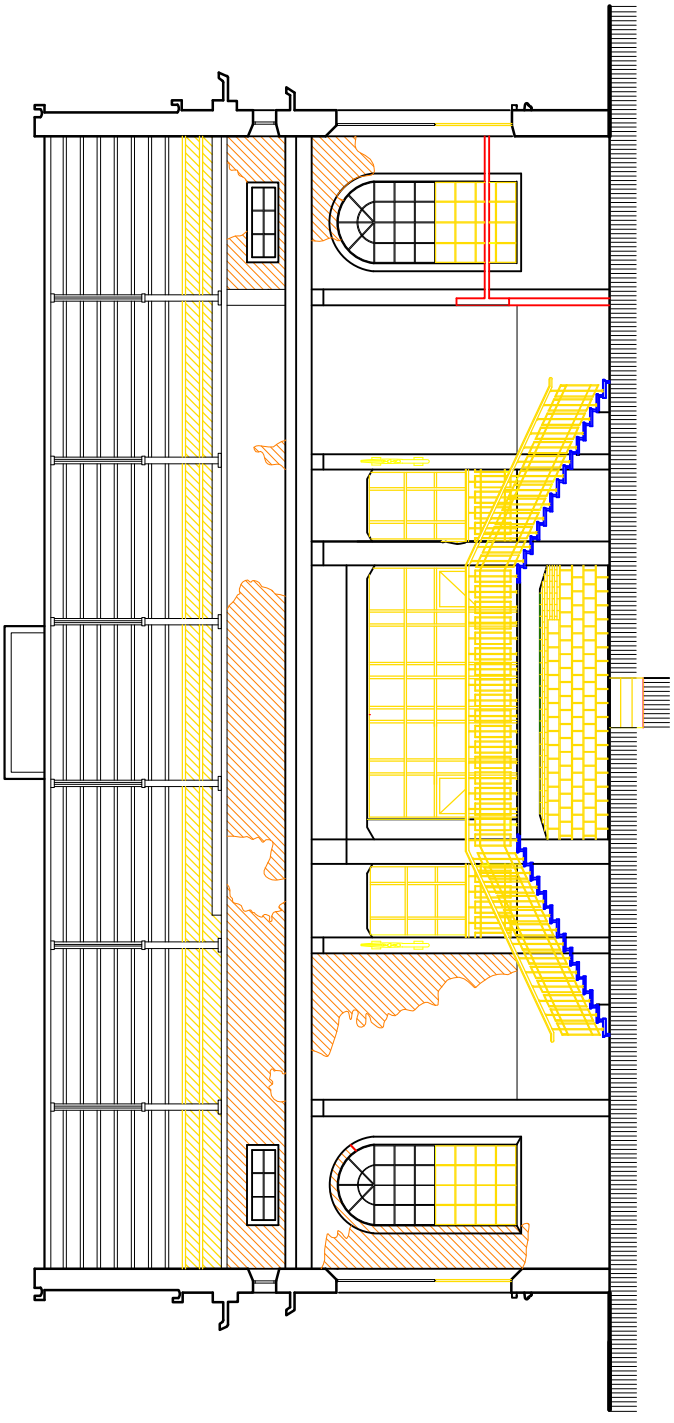
ORIGINAL ELEMENTS SURVIVING TODAY	HUMAN MADE INTERVENTIONS	CHANGES BY NATURE'S EFFECT
01 ORIGINAL ELEMENTS	02 ADDED ELEMENTS	05 LOSS OF MATERIALS
	03 REMOVED ELEMENTS	
	04 CHANGED ELEMENTS	

0 1 2 3 4 5 m

ALTERATION LIST

SECTION B-B

A09



ALTERATION LIST

LEGEND OF ALTERATION

ORIGINAL ELEMENTS SURVIVING TODAY	*HUMAN MADE INTERVENTIONS*	*CHANGES BY NATURE'S EFFECT*
01 ORIGINAL ELEMENTS	02 ADDED ELEMENTS	05 LOSS OF MATERIALS
	03 REMOVED ELEMENTS	
	04 CHANGED ELEMENTS	

0 1 2 3 4 5 m

5. CASE STUDIES

5.1. BALIKESİR POWER PLANT

LOCATION: Balıkesir Power Plant (Salih Tozan Cultural Centre) is located in Balıkesir in Turkey. Balıkesir Railway Station is in front of the Balıkesir Power Plant. (see picture 5.1 and picture 5.1.1 and 5.1.2)

Picture 5.1.1 The location of Balıkesir in Turkey

Picture 5.1.2

Balikesir Power Plant was made by the Italian Ercola Marelli Company in the early 1920s. At the beginning of 1980, the production of electricity was moved to another location and Balikesir Power Plant was used for "Water and Bus Operation Repair Atelier" by the Balıkesir Municipality. Later, the High Council of Monuments`s decision No. 2134 adopted on March 14, 1986 was registered between monumental buildings and transportation of the existing building. The building was restored in 1993 by Balıkesir Municipality, converted into a cultural activities lounge, and since March 1994, it has been a cultural and art centre. In 2000, the cultural centre has been given Balıkesi old actress`s name of Salih Tozan, so it is now called "Salih Tozan Balıkesir Municipality Culture and Art Centre". (see picture 5.1.3)

Picture 5.1.3

Balıkesir former Power Plant is exactly similar to Edirne Power Plant. Balıkesir Power Plant consists of two buildings (Atelier building and Administration building) such as Edirne Power Plant.

Italian Ercola Marelli Company has constructed twice time building (diesel power plant) in Edirne and Balikesir in the same period. However, during the restoration, a black glass volume was added close to the entrance part. (see picture 5.1.4 and 5.1.5)

Picture 5.1.4 Before restoration

Picture 5.1.5 After restoration

Picture 5.1.6 The glass entrance

Picture 5.1.7

Picture 5.1.8 Stage of the lounge

Picture 5.1.9 Interior of the power station

5.2 SİLAHTARAĞA POWER PLANT

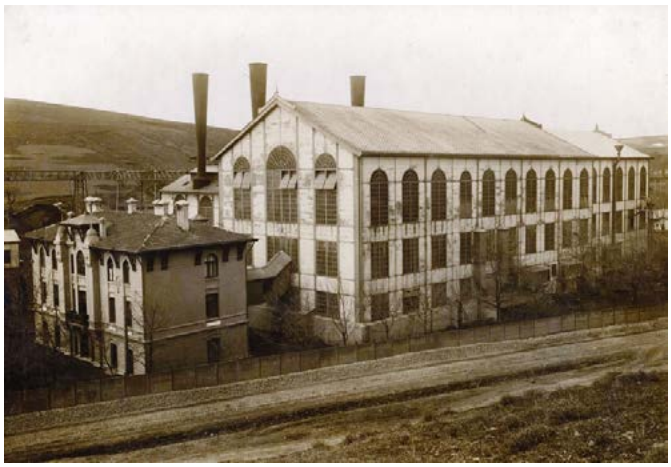
LOCATION: Silahtarağa Power Plant is located in İstanbul, Turkey. The premises of the Silahtarağa Power Plant is a large independent industrial complex situated at the point where the Golden Horn ends and separates into two at the intersection of the Historical Peninsula and Beyoğlu. Silahtarağa Power Plant's address in the present İstanbul is within the borders of the Silahtarağa Village connected to the Alibeyköy neighbourhood of the district of Eyüp. The plant territory lies on the upper end of the Golden Horn between Alibeyköy and Kağıthane creeks. It is bordered by Filköprü Street to the north-west and by Kazım Karabekir Street to the east. This area, which occupies a land of 118,000 sqm, comprises both the production units with engine houses, boiler houses and their supporting units and the living units, such as residence, kitchen, cafeteria and clubhouse.

Picture 5.2.1

Production buildings and other supporting units were situated on the southern part of the premises while the social and living buildings on the northern. The purpose of having built the production units on the southern part of the premises was because this location helped establish a water line connection via the port and docks on the coast of the Golden Horn. (see picture 5.2.1)

HISTORY: The Silahtarağa Power Station was a coal-fired generating station located in Istanbul Turkey. The Silahtarağa Power Plant is both the first plant at the urban scale in the Ottoman Empire and the first thermal power plant that operated with coal. Austro-Hungarian company Ganz wins the bid opened for the installation of a power station in İstanbul. Establishing the Ottoman Electric Company Inc., Ganz begins working. The power plant was Istanbul's sole electricity provider from 1914 to 1952. Since its inauguration in 1914 until 1952 the Silahtarağa Power Plant alone supplied for the ever-growing electricity need of İstanbul with this working system. (see picture 5.2.2 and 5.2.3)

At the time the Silahtarağa Power Plant was inaugurated in 1914, its total production capacity was 13,400 Kw. Silahtarağa's generating capacity reached a peak of 120,000 kilowatts in 1956, after which it gradually declined until the plant was decommissioned on 18 March 1983.



Picture 5.2.2

Picture 5.2.3

Picture 5.2.4

Picture 5.2.5

Reflecting the historical, economical and social stories of the country during the almost seventy years from its inauguration until its shutdown in 1983, the Silahtarağa Power Plant is an industrial heritage that was handed down to the new century together with the produce of the labour and experiences of its works, architects, engineers and administrative staff who have worked in a wide operational field from wiring to the manufacture of distribution units, from delivering electricity subscription magazines to homes to collecting electricity charges.

In 1991, the plant was listed as a 'cultural and natural object of Istanbul' giving it special protection (YENİ aktüel)

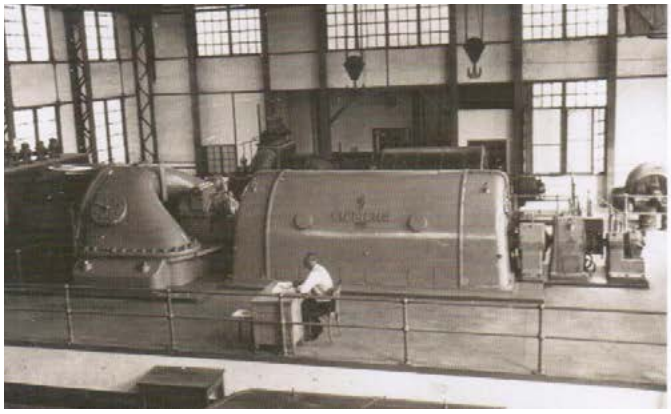
Silahtaraga Electical Power Station was transferred to Istanbul Bilgi University in 2004. The project aimed to convert the former plant into a university campus. Under this plan the former station buildings would be used to house two new museums: One gallery dedicated to modern art, the other an energy museum. The complex was renamed SantralIstanbul in 2007. Alongside the art gallery and energy museum, the university has created: a public library, an amphitheatre, several smaller facilities for art, cultural events and educational institutions. (see picture 5.2.4 and 5.2.5)

RESTORATION:

The remaining generating equipment is preserved as part of the display at SantralİstanbuI energy museum. It was integrated into the design by architect Han Tümertekin. Situated in the turbine hall with three generator groups, the museum is a collection of the steam turbines, the electrical generators and the equipment of the former Silahtarağa power plant, on display in almost original conditions. (see picture 5.2.6 and 5.2.7)

The capability to structure the outer walls with thin iron structures was made possible by structurally disconnecting these walls from the interior so that the outer walls could support themselves. Steel cross posts were added to the outer wall from the inside to strengthen the building. The mezzanine floor is designed with glass balustrade at 12 meters height, which leads the visitors to the control room. This part design for having a good overview of the machinery in the huge hall. Modern glass escalators replaced the former coal conveyors between the floors. The control room is the high part of the building which reach with staircase. It is preserved nearly in its original form, and was only cleaned. The lower level of the technical museum has also 'hands-on' exhibits, where the visitors are encouraged to push buttons and work levers for interactive learning. (see picture 5.2.8. and 5.2.9)

Throughout the Silahtarağa Power Plant was in operation, ground subsided up to forty centimeters after the plant was built. This caused power loss of the engines. The inclination caused in the production buildings by the subsidence of the surface ground towards Alibeyköy creek distorted the horizontality of the pivotal axis of the turbine- generator groups. Malfunctions in the movements of the mobile cranes and deformations in the coal transmission system were experienced due to ground problem. (see picture 5.2.8. and 5.2.9)



Picture 5.2.6

Picture 5.2.7

Picture 5.2.8

Picture 5.2.9

5.3. WAPPING PROJECT

LOCATION: The Wapping Hydraulic Power Station lies on the north bank of the Thames in the eastern district of Wapping, midway between the City of London and Canary Wharf, in England. (see picture 5.3.1)

Picture 5.3.1

HISTORY: The Wapping Hydraulic Power Station, on Wapping Wharf was built by the London Hydraulic Power Company in 1890. One of five London stations of its kind, it harnessed Thames water to provide power, not only to the surrounding docks, but also throughout the central London area. The showcase building of the London Hydraulic Power Company, the Wapping Hydraulic Power Station was used as a model for power stations in Argentina, Australia, New York and Europe.

Picture 5.3.2

Picture 5.3.3

When first built, the pumping station at Wapping was steam driven. Coal was delivered to the adjacent Shadwell Basin and used to fire six steam boilers and their pumping engines. Two electric turbine pumps were added in 1923 and the whole station was modernised and converted to electricity in the 1950s. However, as electricity became cheaper and electronically powered equipment increasingly sophisticated, so industry and private citizens began to forsake hydraulic power. Gradually the London Hydraulic Power Company stations closed until, in the mid-1970s, only one remained at Wapping. When it, too, finally closed in 1977, it was the last of its kind, not only in London, but also in the world. (see picture 5.3.3)

Picture 5.3.4

The building was converted and reopened as an Arts Centre (the Wapping Project) and restaurant (Wapping Food). Exhibitions are held in the basement and the main ground floor hall houses the restaurant. Some of the original equipment is still in place. The transformation of the power station's Boiler and Filter Houses into dramatic new multipurpose exhibition and performance spaces provide excellent venues for East London visitors looking for artistic opportunities. (see picture 5.3.4)

The Wapping Project was developed by the Women's Playhouse Trust. Since its first production at the Royal Court in 1984, WPT has launched major careers for many female writers, poets, visual artists, choreographers, composers, filmmakers and designers. The Wapping Project is the brainchild of acclaimed theatre director Jules Wright, who organised the transformation of the building and has curated the subsequent programme. (see picture 5.3.5 and 5.3.6)

Picture 5.3.5

Picture 5.3.6

ARCHITECTURAL DEVELOPMENT:

The architectural aim was to keep as much of the existing building structure and machinery as possible, and to maintain both the atmosphere of the power station's industrial past and the archaeological detail that underpins it. (see picture 5.3.7)

The Wapping Project has carefully returned this historic building to its essential structural form, providing dramatic exhibition and performance spaces. These have been created from the Boiler and Filter Houses, which have both been stripped back to their 1890 form. To fulfil the extremely varied uses required of them (including, for the opening installation, flooding of the floor), the spaces have been designed for the greatest possible flexibility. The building may be used as a completely empty space, or may be installed with seating for 350 people.

The new architectural additions reflect today's technology, and make a quiet but clear distinction between what is old and what is new. The new insertions are intended to emphasise the industrial scale of the building by their own lightness of touch for example, in the case of the new suspended Boiler House staircase that does not touch the ground. The primary elements of the new structures are of steel, slate and glass, and the juxtaposition of the light and transparent qualities of the new with the gravity of the original building intensifies the effect of each. (see picture 5.3.8)

Rules have been broken to give the contemporary elements a feeling of architectural impermanence with, for example, stairs made from mild steel and untreated to develop a patina of rust. The new work identifies with the beauty of the historic building and aims, above all, to create a backdrop against which artists can create bold contemporary work. (see picture 5.3.9)

Picture 5.3.7

Picture 5.3.8

There is also a Wapping Project – Bookshop-In-A-Greenhouse where they also hold events including an outdoor cinema night. (see picture 5.3.10)

Picture 5.3.9

Picture 5.3.10

5.4. CENTRALE MONTEMARTINI MUSEUM

LOCATION: The Centrale Montemartini was the first public power plant to produce electricity for Rome. It opened at the beginning of the 1900s on the Via Ostiense, between the General Markets and the left bank of the Tiber.

Its history is intertwined with that of the Municipal Electric Company, now Acea, which was created in 1909. (see picture 5.4.1)

Picture 5.4.1

The plant was opened in 1912 and just the following year it was named in honour of the Officer for Technology, Giovanni Montemartini. (see picture 5.4.2)

The position chosen for it was near to the river, with a constant supply of water, and outside the customs enclosure, so it was not subject to combustion restrictions.

The extremely modern productive machinery (groups of diesel motors and alternator steam-turbines) were provided by the Tosi firm; initially they produced 7000 kW of power, increased in 1924 to 16,000, thanks to the addition of steam turbines. In 1933 two large diesel engines were installed.

Picture 5.4.2

In 1963 part of the plant was decommissioned and a few years later the whole plant ceased production. The building was restructured and transformed during the 1980s into an " Art Centre". Today, it is an exhibition centre which houses many ancient sculptures from the Musei Capitolini, thus establishing an evocative union between classical and industrial archaeology. The engine room, which is in Art Nouveau Style, is particularly successful; the turbines, diesel motors and the large steam boiler stand out, beside the fine forms of the ancient sculptures. The museum arrangement also aims to reconstruct the ancient monumental complexes, from the imperial age to the late empire.

RESTORATION:

The new exhibition space for the Musei Capitolini in the former Giovanni Montemartini Thermoelectric Centre, an extraordinary example of industrial archaeology converted into a museum, began in 1997 with the transfer of hundreds of sculptures to the new location during the restructuring works carried out across much of the Capitoline complex. (see picture 5.4.3)

Picture 5.4.3

To create space in the Museum of the Palazzo dei Conservatori, the Museo Nuovo and the Braccio Nuovo, while keeping the works of art accessible to the public, an exhibition was created in 1997 in the restructured rooms of the first public electricity plant in Rome. The exhibition was entitled "The machines and the gods": it put side by side two diametrically opposed worlds, those of classical art and industrial archaeology. (see picture 5.4.4 and 5.4.5)

In an atmospheric game of contrasts, the old machinery of electricity production became the backdrop for masterpieces of ancient sculpture and precious goods found in the excavations of the late nineteenth century and the 1930s. The display reconstructs some of the great monumental complexes and illustrates the development of the ancient city from the Republican era to the late imperial age.

The adaption of the building into a museum, the restoration of the machines and the educational sections about industrial archaeology have all been created by ACEA.

The outstanding museum space was originally thought of as a temporary solution. However when part of the sculptural collection was returned to the Campidoglio in 2005, on the conclusion of the restructuring works, it was decided to turn the building into a permanent location for a collection of the Museo Capitolini's most recent acquisitions.


Picture 5.4.4

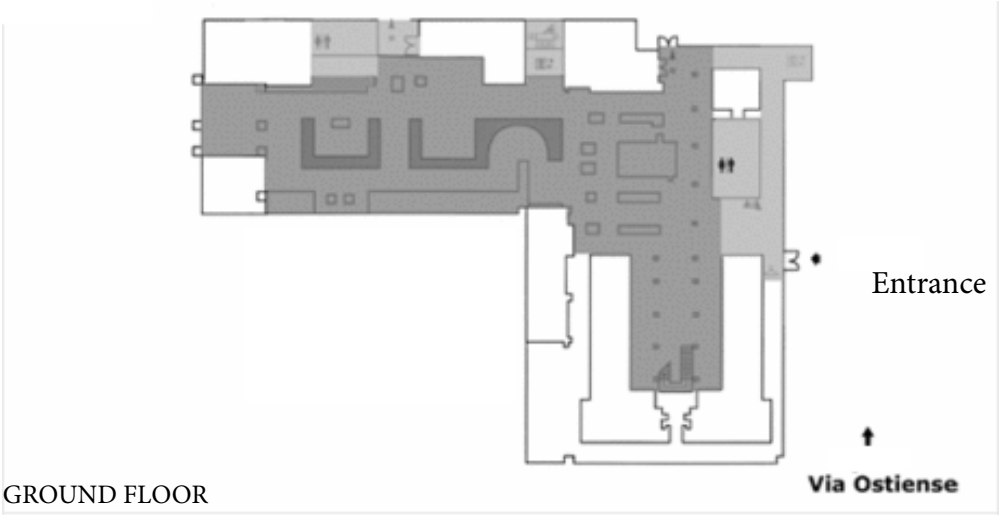

Picture 5.4.5

The space is used for continual experiments in possible display methods, particularly those connected to scientific research on the remains; bringing together works from the same area of provenance also allows the links between the museum and the fabric of the ancient city to be continually renewed. (see picture 5.4.6 and 5.4.7)

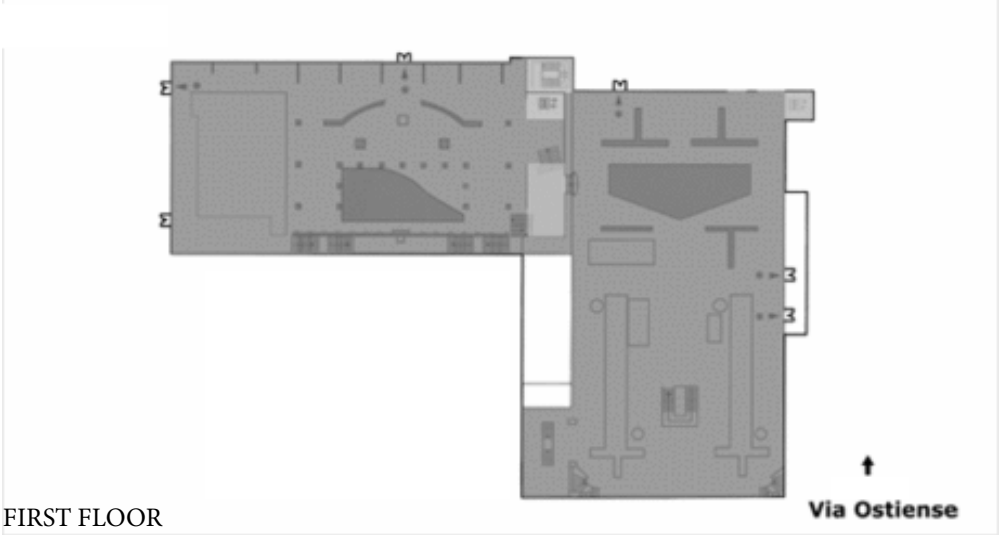
The museum itself is part of a wider project to redefine the Ostiense Marconi area, converting it into a cultural centre for the oldest industrial area of Rome (including, as well as the electricity plant, the Slaughter House, the Gasometer, structures from the docks, the old Mira Lanza site and the old General Markets), with the defining structure of the university campus of Roma Tre and the creation of the City of Science. (see drawing 5.4.1)

Picture 5.4.6


Picture 5.4.7



GROUND FLOOR



FIRST FLOOR

Drawing 5.4.1

CONCLUSION

For the Intervention phase of this thesis, it was taken, as a reference, the Case-Studies presented before. Each of the examples were quite helpful for the kind of approach and methodology chosen. The first example shown, The Balıkesir Power Plant, the twin building of Edirne Power Plant, it is the one that was less considered by the fact that it was completely restored to its original look, it looks more of a new construction rather than an historical one. The choice of the new glass building constructed next to it, also broke the impotence of the original building. The interior was completely modified for the new uses denying completely the industrial character of its original function, which is exactly what was avoided in this thesis.

The second example, Silahtarağa Power Plant, was the most important reference. The industrial atmosphere was enlightened by keeping all the machinery and turning it usable for exhibition purposes. The main intervention based on stabilizing the structure, the only exception was the construction of a mezzanine floor, in order to give an extra point of view to the exhibition. This last choice was adopted in this thesis since it was necessary to extend the area for the indoor exhibition.

The same as the second example, the Wapping Hydraulic Power Station was also extremely helpful special when concerned with the differentiation between the original elements and the new. Everything was kept as for the original state of the building and everything new, was built respecting the original materials but in a contemporary way in order to be easily perceptible the difference.

Regarding the Montemartini centre, it was relevant in the way they kept the industrial space designing the exhibition as a independent and versatile element, creating a clear contrast between the industrial elements and the fine art.

The final Case-Study, Castelviero hydroelectric plant is extremly crucial for the thesis work. It has a similar plan with Edirne Power Plant in Italy. It was constructed by same Company and same period. The window style and interior lighting design is the same with Edirne Power Plant.

6. RESTORATION AND INTERVENTION

6.1. Restoration

6.1.1. Aim of the Restoration

As mentioned before, Italy constructed some power plants and the same building was repeated in the different city in the same period such as Edirne and Balıkesir. These plan type of power plan can be seen in Italy, one example in The Castelviero hydroelectric plant that mentioned in case study.

The Edirne Power Plant was constructed in the industral period. It refleted in that period. Moreover, its plan layout, façade features and architectural elements can be considered a quite interesting example of industrial architecture. The fact that, along with its garden, it is considered Zindanaltı-Tatarhaniler Cemetery, which is protected area, makes it a building of an extreme importance. For this reason, the building must be conserved, providing a suitable function to stand for the future generations.

6.1.2. Approach of the Restoration

The Edirne Power Plant was constructed in industrial period with different architecture style according to Turkish architectural style. Especially, window style. The approach of the restoration of the Edirne Power Plant is going to show its period and its age. Thus, The original elements will be conserved. Some part will be repaired that damaging to the building However, The interior and exterior facade will not be made more interventions. Thus, the visitors could understand its period and age.

The restoration approach is not going to be as Balıkesir Power Plant's restoration. The intervention is not going to be constructed recently as a new construction.

- Damaging causes of the building will be repaired. On the other hand, the facade of building will not made more intervention. (The façades will not be covered with plaster)

- The building surrounding, the garden which is protected area, must be preserved as well as the building. Maintaining the present water reservoir, pool, excavation items and tresses.

- The original plan layout and façade features, still present inside the building and in a stable state, will be maintained and conserved.

- All the elements that are no longer present in the building will not be completed or reconstructed, even having the proper drawing and data to do it. If an intervention is necessary, given the new function of the building, new elements will be placed following a contemporary line in order to be easily perceptible what is original and what is not.

- Some of the missing elements of the building will be made of contemporary techniques such as handrails and doors will be made by new contraction.

-.All of the alterations and/or additions, previously done, that damage the building in terms of physical and aesthetical aspects and that creates difficulties to perceive the original architectural elements must be removed.

6.1.3. Building Functions

Finding a new function for this building, it is crucial if we want to assure a periodical maintenance and repair in order to assure its continuity for our future generations. The selection of the new function of the building, it was taken into consideration, not only, the features of the building but also, surrounding of the building As it was previously mentioned about Zindanaltı-Tatarhaniler Cemetery, it was found several gravestones and excavation items in this location. Moreover, The city of Edirne has many old cemeteries. In that respect, these pieces can properly conserve in the Power Plant and show them to the public. The City of Edirne needs museum for the gravestones that were found at the excavation works. Thus, the Power Plant can transform an **Archaeological Museum** to be easily accessible to the public. The outside space of the Power Plant can be showed the excavation iteams. Given the previous function of the building, it is also proper to reserve a space in order to explain the original function of the building, an electrical museum.

There will be two entrances to the Archeological Museum, the main one is from the south-east façade which is existing and the other entrance is from the inside of the Souvenirs Shop which has staircase to reach underground of the Power Plant.

6.1.3.1. Interior Functions

R01 Room, Exhibition space

The main entrance leads to the central room, R01, which was the core of the old Power Plant. In this room will be located the main part of the archaeological exhibition. The late periodic glazed and unglazed ceramics (meerschaum and ceramic vessel pieces) and a few ceramic vessels, which were made with sigraffitto technique from early period, which have been found at the excavation, will be exhibited inside glass tables that is organized along the room. The holes on the floor, previously used for the car repair, will be covered in glass to assure a safe circulation through the room; inside this holes will be placed grave stones with bigger dimensions that can be easily seen from the top.

On both sides of the entrance, two information panels will be located for the description of the excavation works and what is the exhibited. In front of the panels, there will be seating. *(see Picture 6.1 and 6.2)*

Picture 6.1 (2012 Venice Biennale)

Picture 6.2 (2012 Venice Biennale)

R04 Room, Seminar Room

The room R04 will be used as a small seminar room in which can be used not only for the exhibition but also for external purposes as well.

6.3.2. R02, R03 and R07 Room, Video Room

R02, R03 and R7 are video rooms where the visitor will be able to see and hear extra information about the archaeological excavation and the exposition has given in this way a more interactive component to the museum.

6.3.4. R05 Room, Computer Room

R05 will be a computer room where the visitors can search extra information about the exhibition as well as find more fun facts about the building.

6.3.5. R06 Room, Projector Room

R06 room is located right in front of the main door. Taking advantage of the fact that it is semi-opened to the main room, it will be used as a projection room, becoming a "welcome card" for the visitors, since it will be the first thing they will see when they enter the museum. The windows of this room, will be kept open in order to allow the visitor see the type of work done on the laboratory of the museum. In this way the visitor will have two different perspectives of the museum, the main exhibition where the final pieces are shown and the laboratories where the pieces are being prepared and conserved to be exposed later. However, the visitors can not pass the laboratory.

6.3.6. R08 Room, Exhibition space

Taking advantage of the height of the R01 room is 12 m. in order to extend the exhibition space, it was designed a mezzanine floor to show the rest of excavation items along with its respective information panels. This new floor also allows the visitor to have a different point of view of the room, with its heigh level, people can understand better the structure and the typical environment of an old Power Plant.

6.3.7. R09 Room, Electrical Part Exhibition

Through R01 room, it is also accessible the second part of the exhibition. The stairs located next to the south-west façade accesses the basement floor, the room R09 (the old machines room), where it will be shown the history of the building itself, as a Power Plant. Some old pictures, plans and even small objects will be placed inside glass tables, along with information panels explaining the work process of the fabric and its relation with the place where is located. The visitors can reach to the Souvenir shop from R09 room. The connection of the Souvenir shop will be new construction from the under-ground.

6.3.8. R10 Room, Storage and Mechanical Room

R10 is going to be Storage for Archaeological Museum and some part will be used for Mechanic and electric.

Administration Building

The North-East part of the building its completely separated from the main room, R01, its access is given by a more private entrance from the North-West façade. Taking this into account, all the laboratories and administration will be located here as well as some rooms connected with educational purposes..

6.3.9. R11 Room, Entrance

On the ground-floor, the room R11 allows the access to a more restricted area, the laboratory (R12 and R13)

6.3.10. R12 & R13 Room, Laboratory

R12 and R13 laboratory, where the specialists are working on the restoration and conservation of the future pieces of the exhibition.

6.3.11. R14 Room, Hall

Through the stairs, on the first floor, R14 room leads to the educational and administration part of the building.

6.3.12. R15 & R22 Rooms, Classroom

R15 and R22 are both classrooms that can be used by the students. In these classroom will be given a different sort of courses for students.

6.3.13. R16 Room, Computer Room

R16 is a computer room that can be used as a support room for extra researches.

6.3.14. R17 Room, Administration Room

R17 room is administration room for the Museum.

6.3.15. R18 Room, Hall

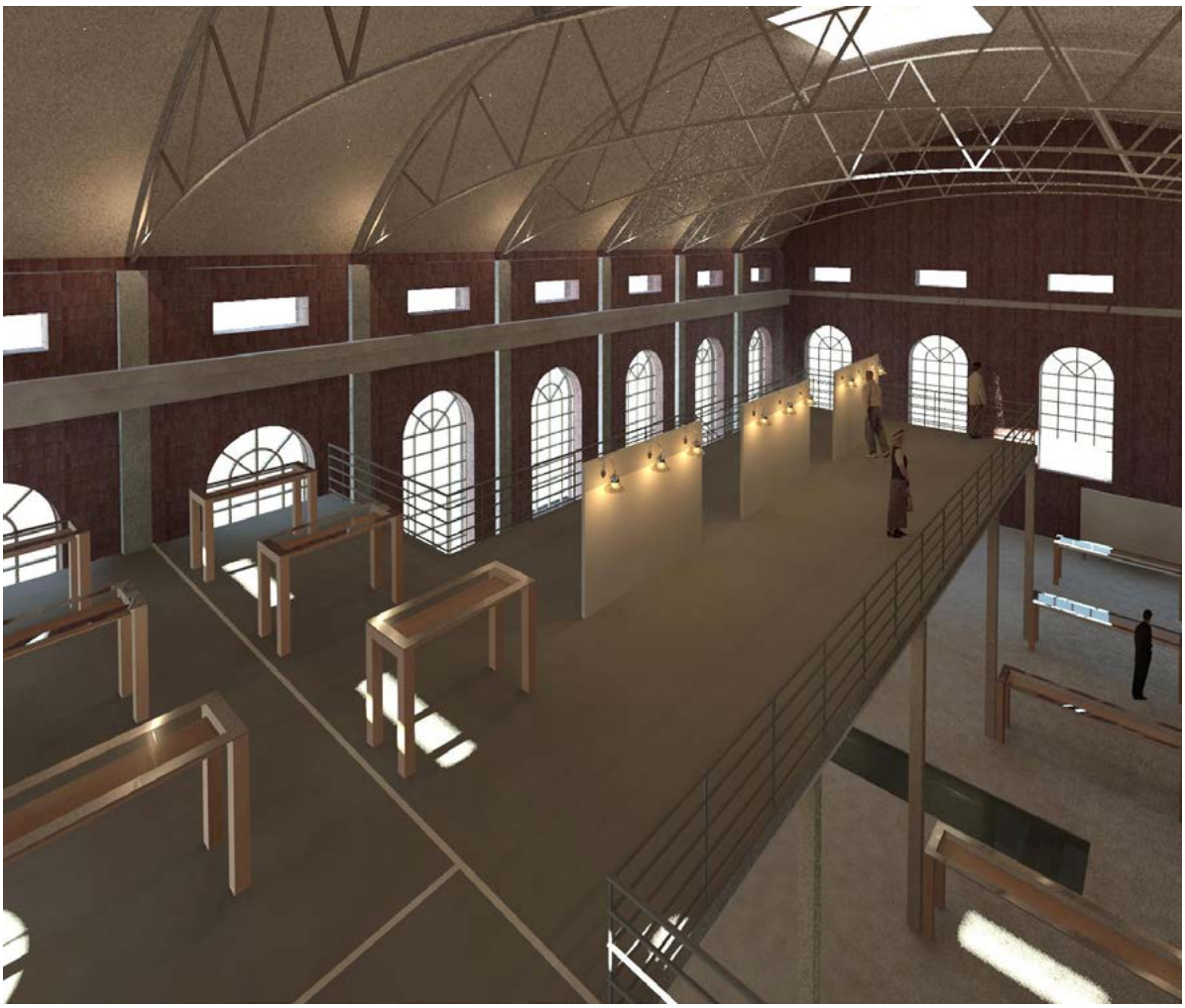
R18 its a small hall that allows the access to the research zone of the museum that will be opened not only for the staff but also for schools and also research groups that might be interested on the subject of the exposition.

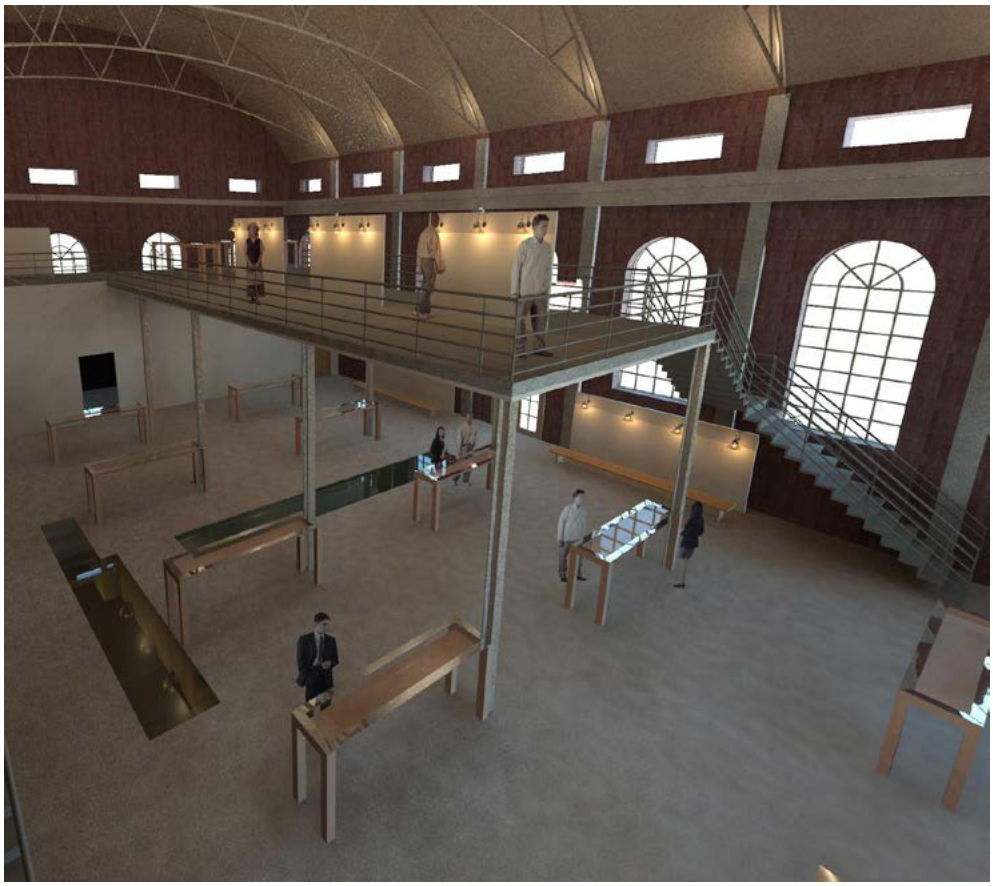
6.3.16. R19 Room, Library

It leads to R19, the library, where it is possible to find a bibliographic collection about the exposition topics.

6.3.16. R20 & R21 Rooms, Bathroom

R20 and R21 are used for bathroom. One is for women, other one is for man.





6.1.3.2. Landscape Design Approach

Taking the original building into a reference point grid system has been created as a 5 m to 5 m according to the building dimensions. This grid system as the base to decide which area will be hard-surface and soft surface. According to this gridal system, some part will be an aero archaeological exhibition that find some gravestones. To support the museum building it was constructed new dependences as restaurant according to the main building shape and souvenirs buildings. The souvenir shop will be reachable from the staircase of the basement of the main building. The new construction will follow the contemporary way in order to be visually distinguishable compared with the historical building. The façades will be glass curtain wall to allow a better view for the exterior garden. The roofs of the new structure will be slope roof.

The car parking will be located next to the Ulus Bazaar that the building located on the site vicinity. There is two accesses from the car parking to the building.

The functions are connected with different kind of pavement. The different pavement connects directly all the building and some elements such as the pool and the water reservoir giving a visual orientation to the visitors. The existing of trees in the outside space were maintained.

There is two entrances, the main one on the South-west façade directly oriented to the entrance of the main building and the other is the existing one by South-East. From the main entrance to the building, there is some green parts to follow the main door.

6.2.Interventions

6.2.1. Reconstructed

1. The vault roof will be reconstructed since the origin one was no longer stable and able to perform its purpose.

2. The windows will be all re-made, maintaining the original drawing (to give a continuity to the façade) since they are no longer present in the building.

3. The door on the North-West façade, the one that was originally a window, will be closed and the window will be reconstructed in order to maintain the original plan and the visual continuity of the façade.

4. The main door on the South-West façade will be reconstructed to its original dimensions since it was subjected to an previous alteration.

6.2.2. Replaced

1. The broken parts of the staircase will be replaced to assure the safeness of its use.

2. The pipeline system will be replaced with a new one in order to adapt the building into the new technical requirements.

3. The plaster of the rooms R09, R10, R14, R15, R16, R17, R18, R19, R20, R21 will be totally replaced given its deteriorated condition.

4. The door of the South-West façade will be closed since it was not on the original plan.

6.2.3. Added

1. To full-fill the requirement of the new function, all the technical facilities will be added, following the contemporary standards.

2. The handrails of the S01 S02 S03 S04 and S05 will be all added new since the original ones are no longer present in the building or not integral enough to be maintained.

3. The holes on the R01 will be covered in glass in order to assure the safety circulation of the room.

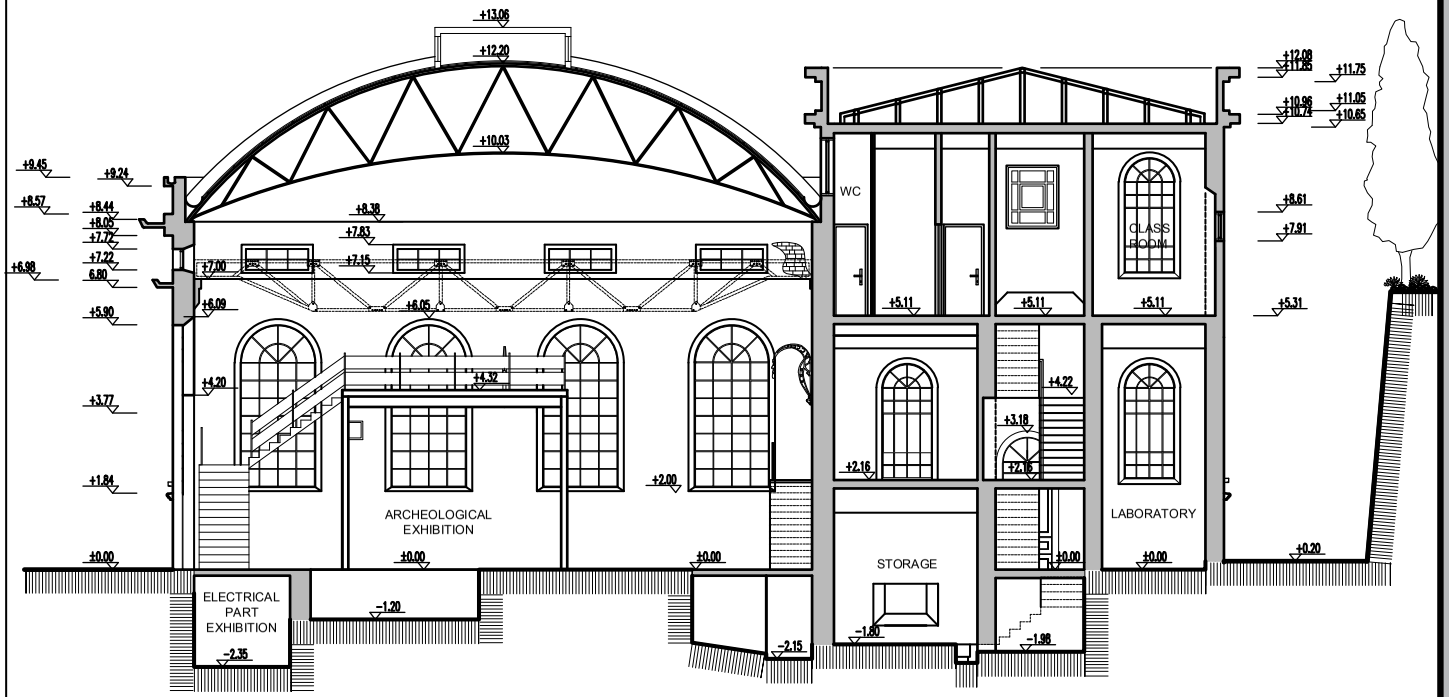
4. The room R02, R03, R04 and R07 will be added, removing the previous construction on the same place that was not part of the original plan.

5. On the main wall of R06, three windows will be added to allow the visitor to have a look at the works done on the laboratory.

6. On R01, a new Mezzanine floor will be placed, taking advantage of the rooms height and to extend the main exhibition area.

6.2.4. Cleaning

Cleaning is the extraction process of dirty surface elements. In order to maintenance of the stone and brick, incoming water should be prevented with a layer of moisture-proof. Then salts on stone materials should be cleaned. First of all, the surface should be brushed to remove dust, salts and loose parts and the surface should be wetted with clean water. When water dry on the surface, salts ,which is into the surface, carry the outside of the surface. These salts on the surface should be cleaned by a sponge over and over again. (see Table C01 and C02)



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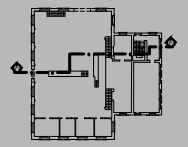
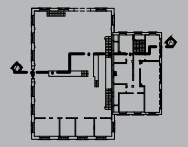
THESIS CO-SUPERVISORS:
ARCH. SYLVIE DUVERNOY
ARCH. MEHMET ALPER

STUDENT:	NUMBER:
ÖZGE NOYAN	764300

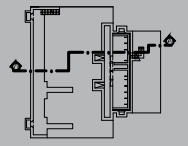
RESTORATION



GROUND FLOOR

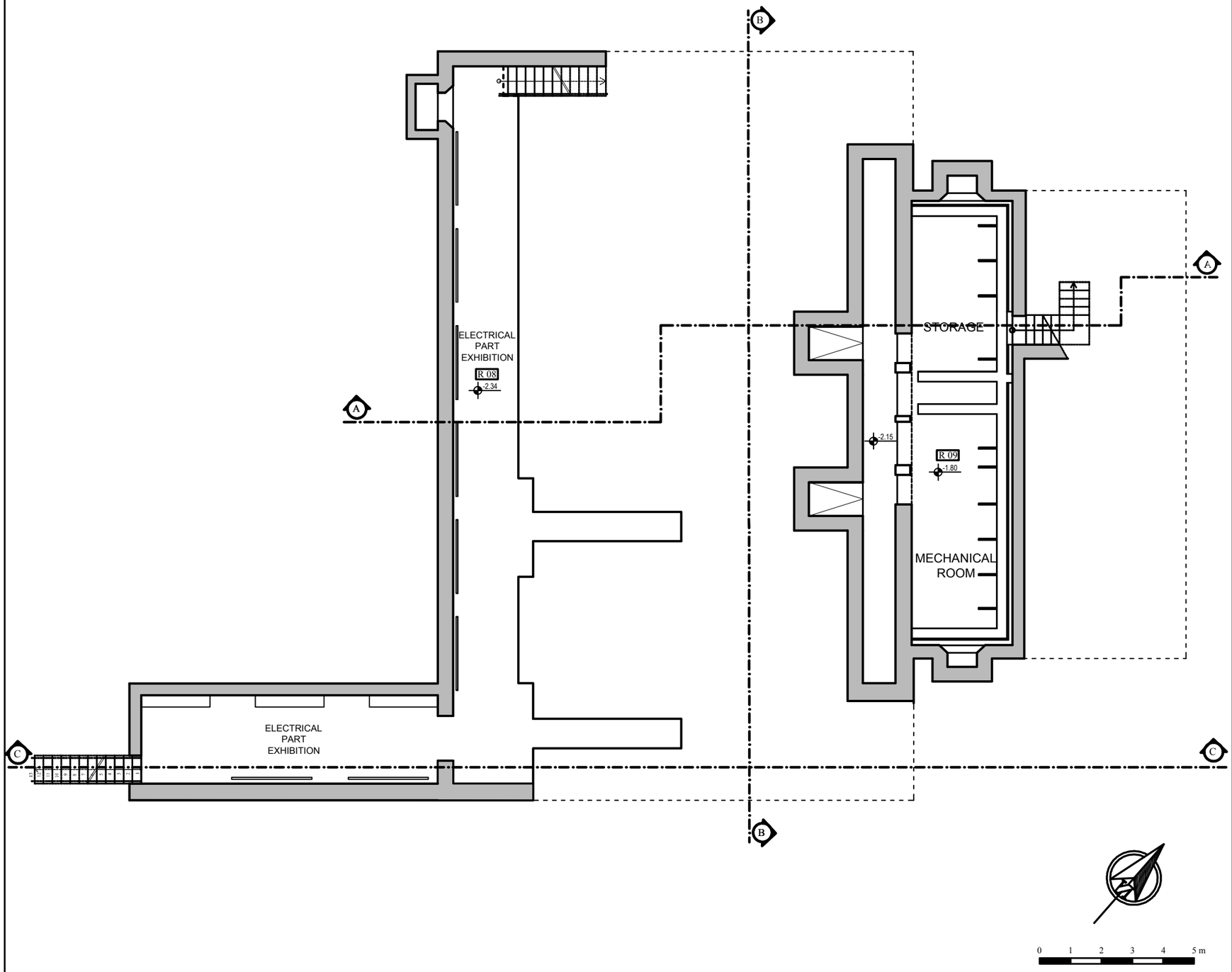


FIRST FLOOR



BASEMENT FLOOR

SHEET NAME:	SECTION A-A
SHEET NUMBER:	**34**



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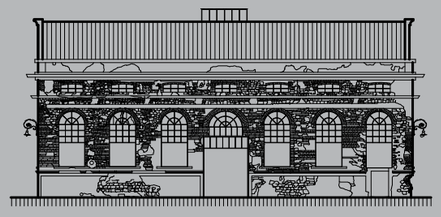
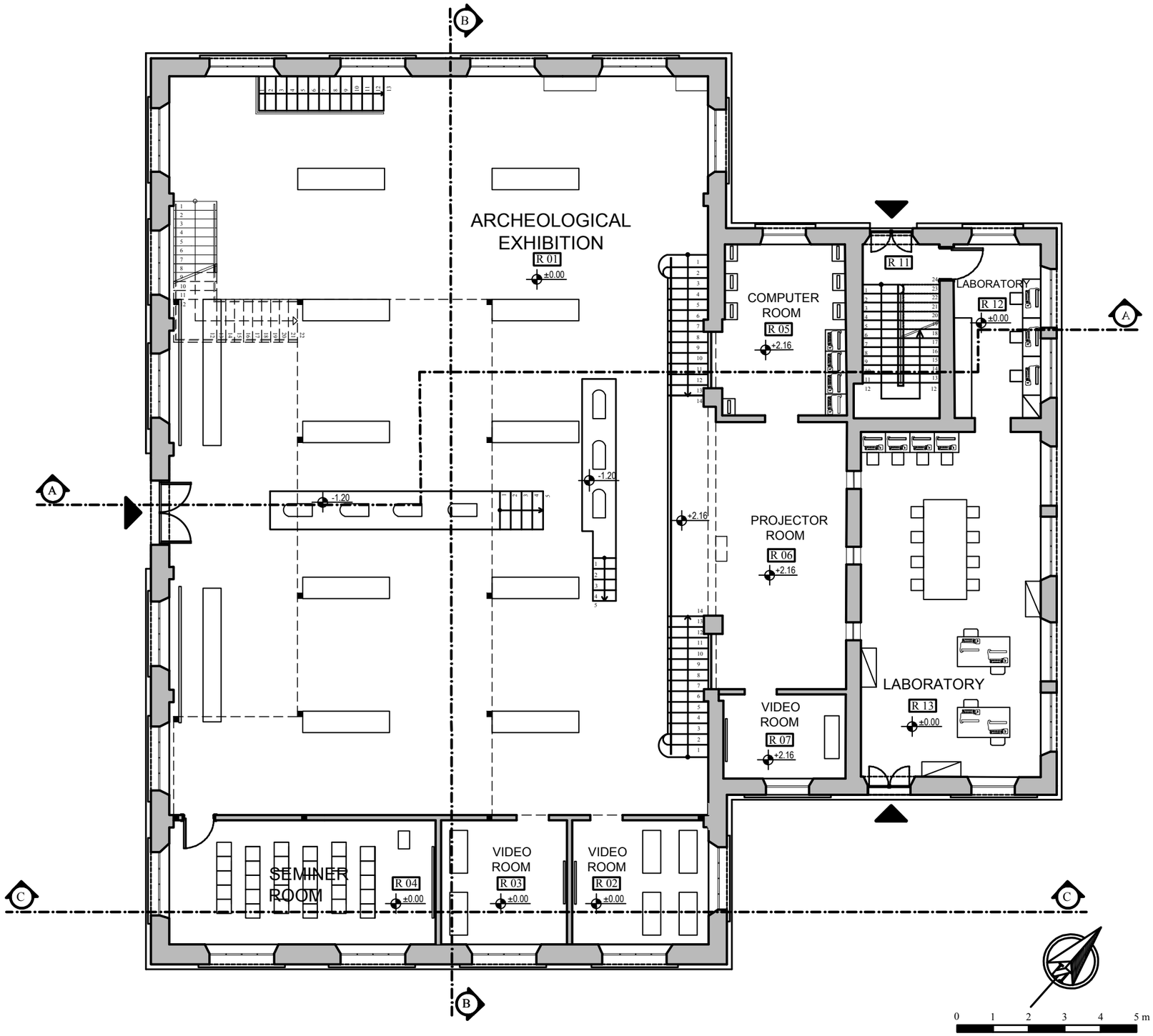


SHEET NAME:	BASEMENT PLAN
SHEET NUMBER:	**33**

Drawing 6.1.2



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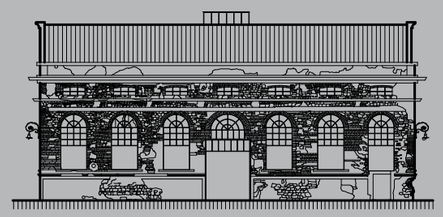
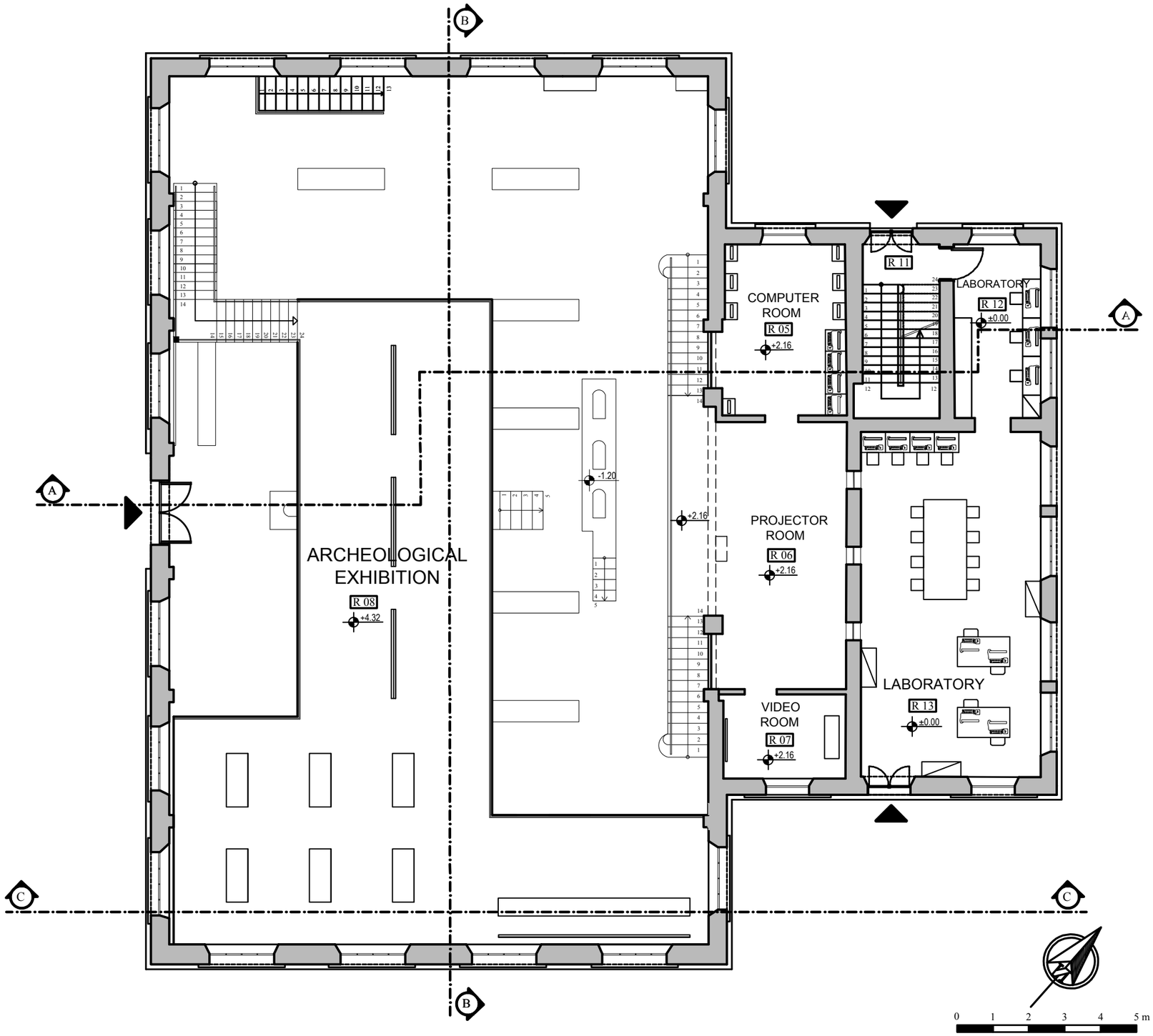
RESTORATION



SHEET NAME:	GROUND FLOOR PLAN
SHEET NUMBER:	**30**

Drawing 6.1.3



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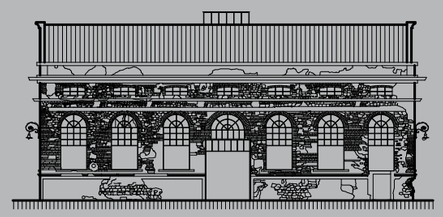
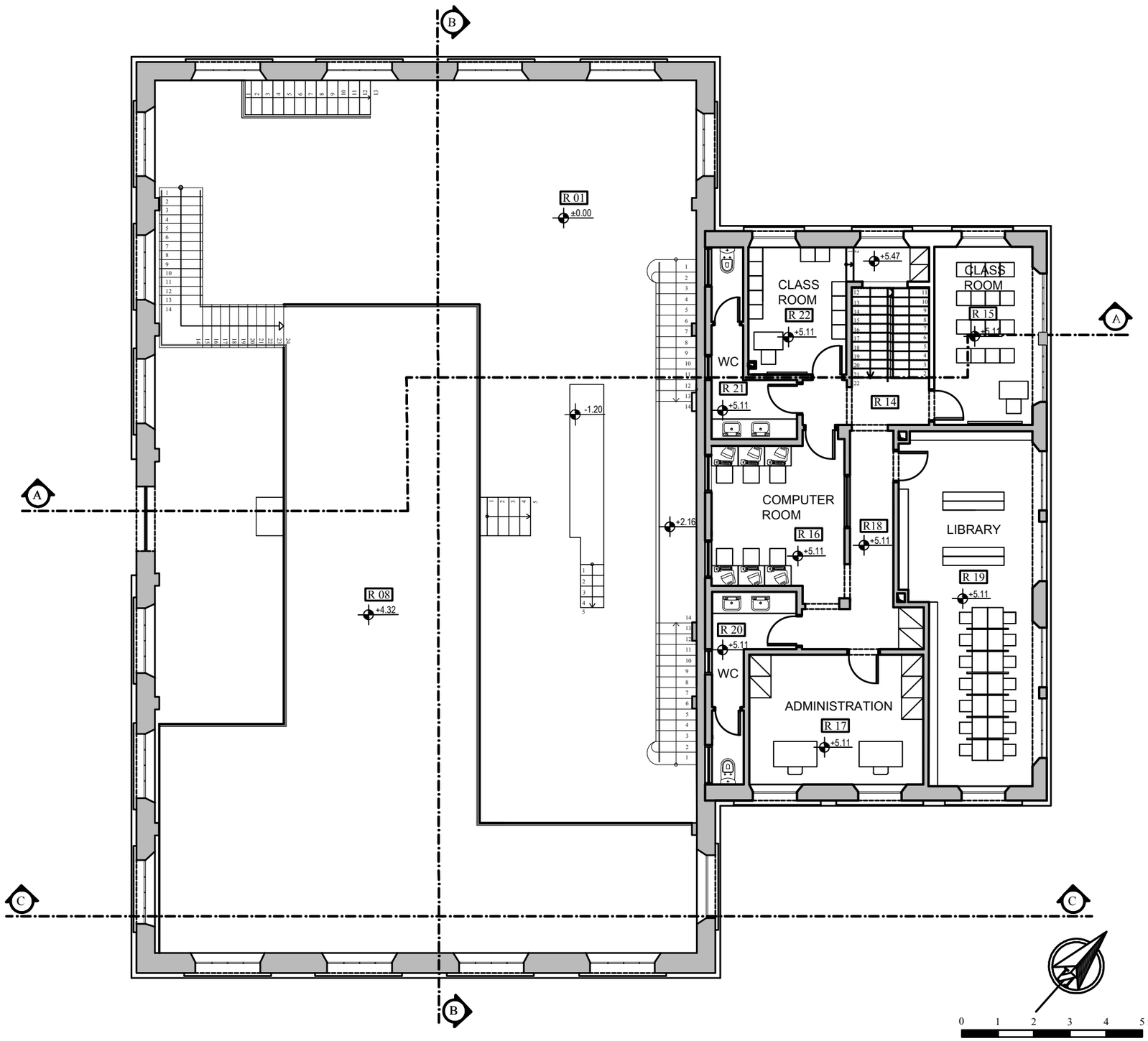


SHEET NAME:	MEZZANINE PLAN
SHEET NUMBER:	**31**

Drawing 6.1.4



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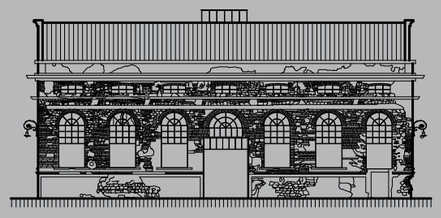
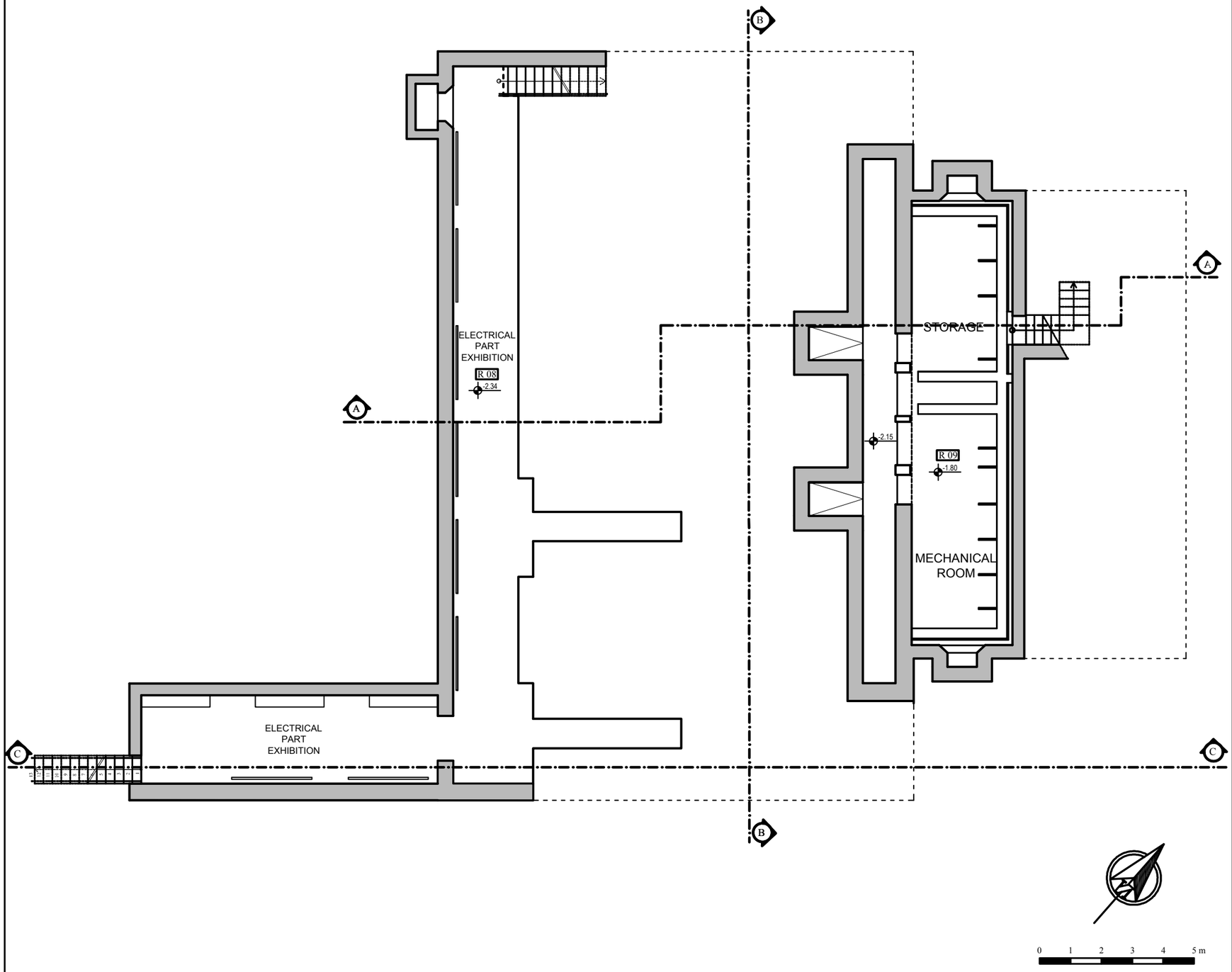
RESTORATION



SHEET NAME:	FIRST FLOOR PLAN
SHEET NUMBER:	**32**

Drawing 6.1.5



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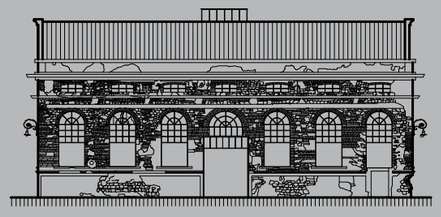
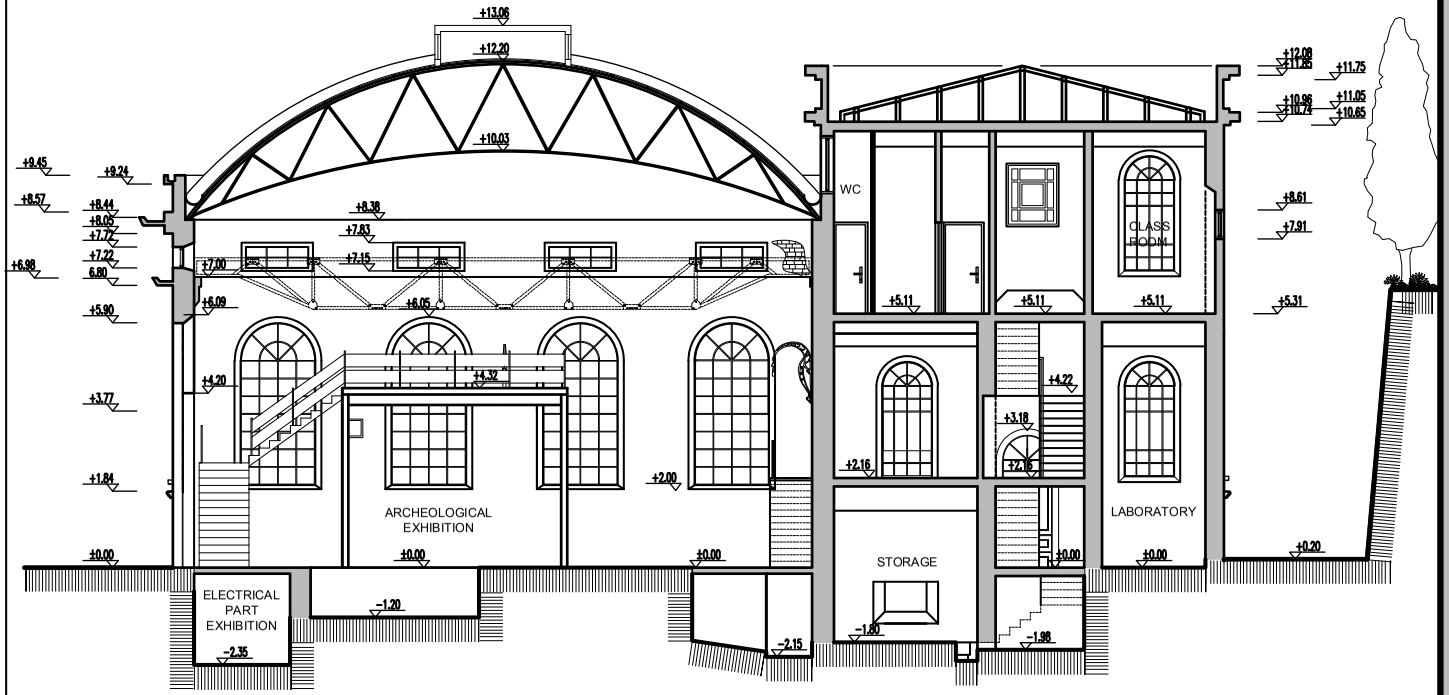
RESTORATION



SHEET NAME:	BASEMENT PLAN
SHEET NUMBER:	**33**

Drawing 6.1.6

Drawing 6.1.7



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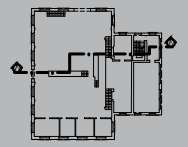
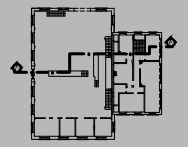
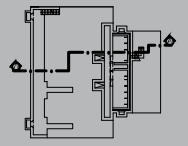


GROUND FLOOR



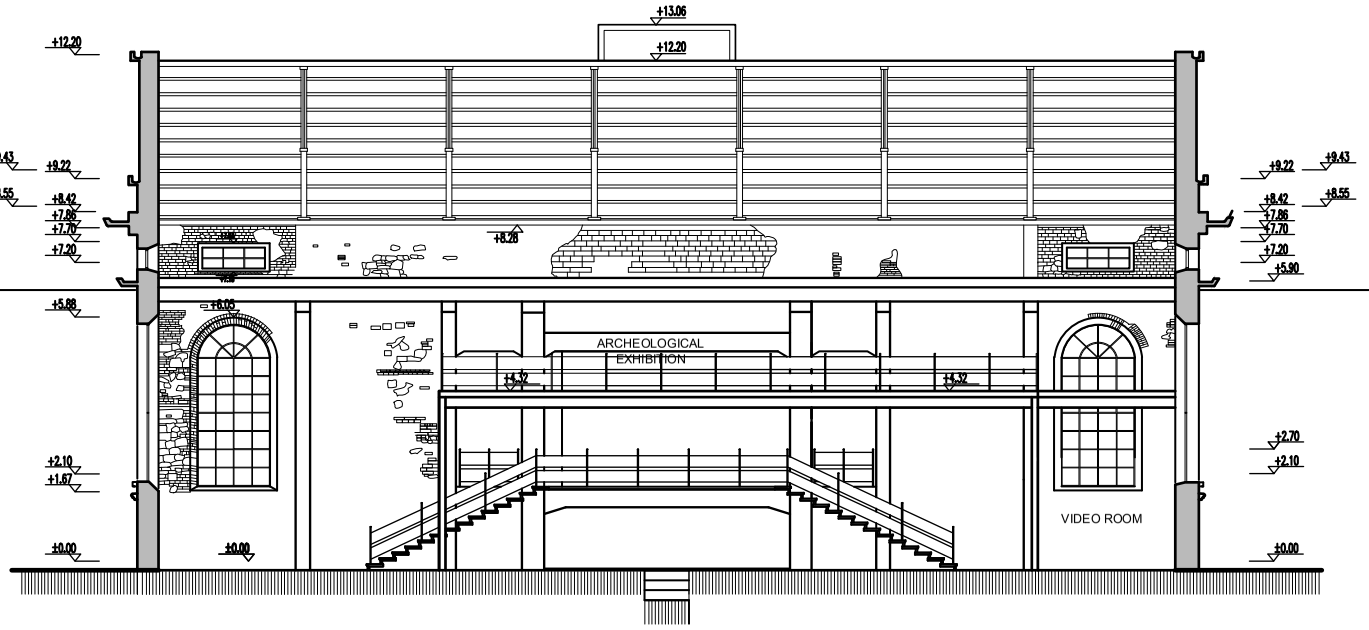
FIRST FLOOR



BASEMENT FLOOR

SHEET NAME:	SECTION A-A
SHEET NUMBER:	**34**

Drawing 6.1.8



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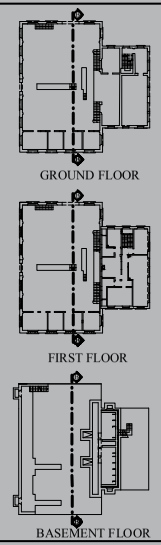
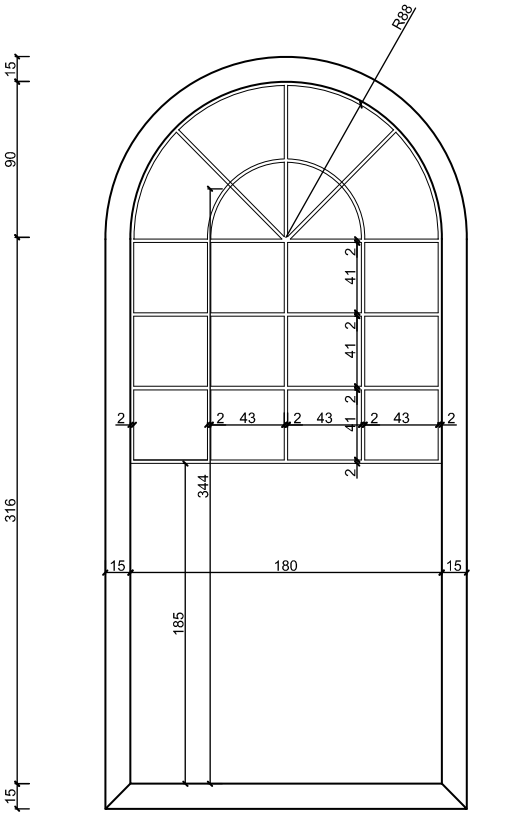
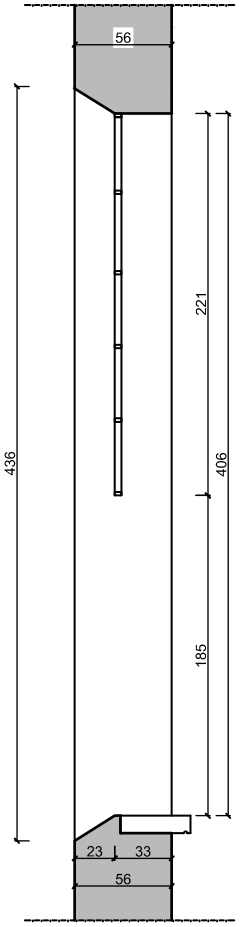
RESTORATION



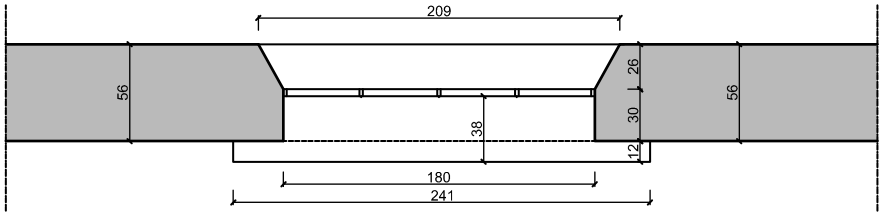
SHEET NAME:	SECTION B-B
SHEET NUMBER:	**35**

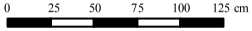


IN



OUT





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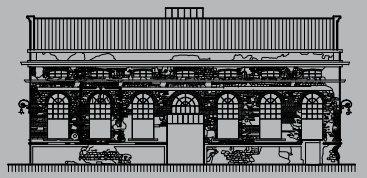
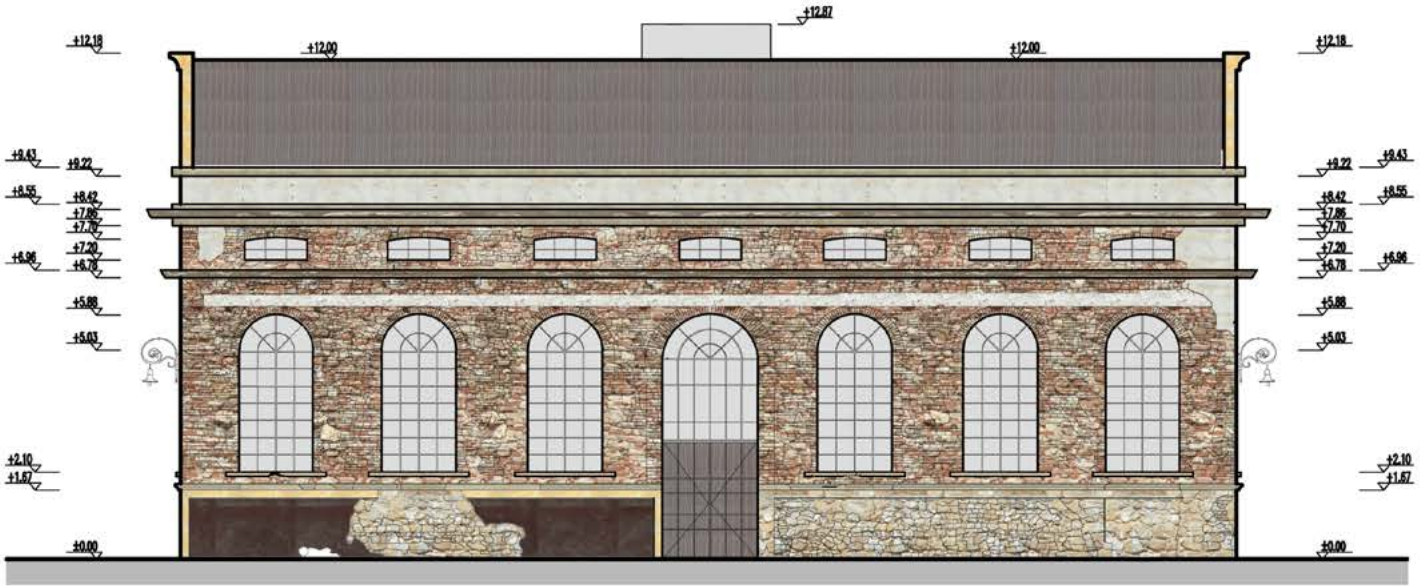
SURVEY



SHEET NAME:	DETAIL 2
SHEET NUMBER:	**27**

Drawing 6.1.10



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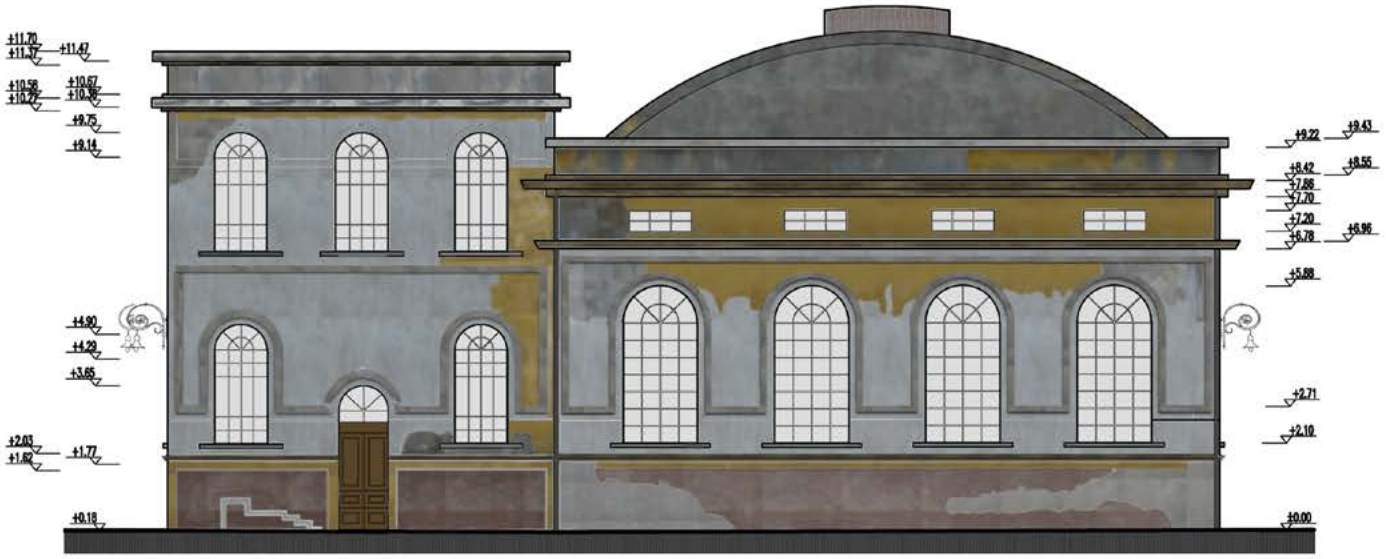
INTERVENTION

SHEET NAME:	SOUTH-WEST ELEVATION
SHEET NUMBER:	**37**

Drawing 6.1.11



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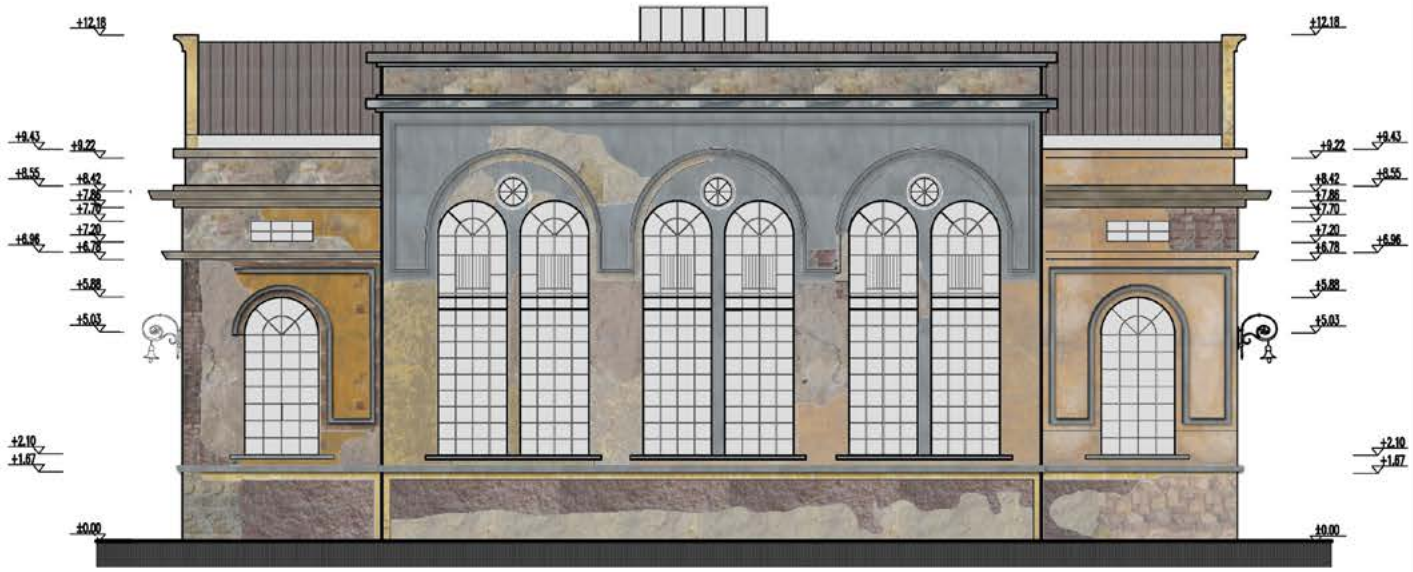
INTERVENTION

SHEET NAME:	NORTH-WEST ELEVATION
SHEET NUMBER:	**38**

Drawing 6.1.12



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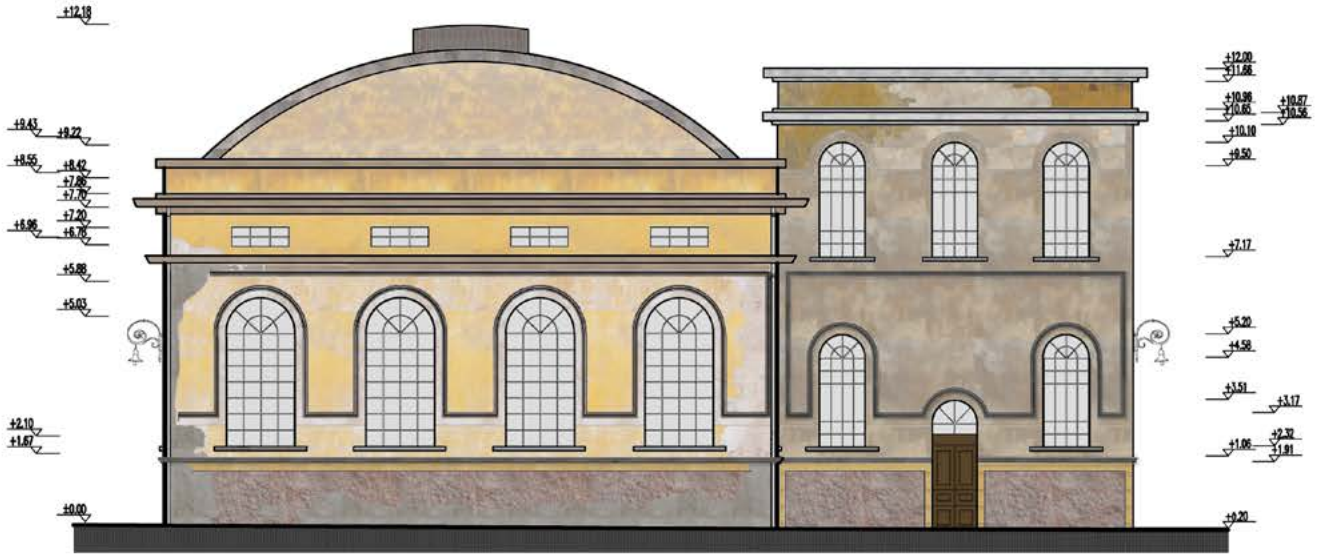
INTERVENTION

SHEET NAME:	NORTH-EAST ELEVATION
SHEET NUMBER:	**39**

Drawing 6.1.13



0 1 2 3 4 5 m

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INTERVENTION

SHEET NAME:	SOUTH-EAST ELEVATION
SHEET NUMBER:	**40**

Drawing 6.1.14

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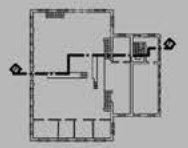
INTERVENTION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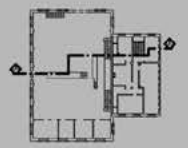
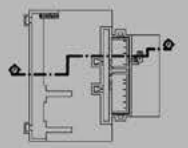

FIRST FLOOR


BASEMENT FLOOR

SHEET NAME:	INTERIOR 1
SHEET NUMBER:	**41**

Drawing 6.1.15

0 1 2 3 4 5 m

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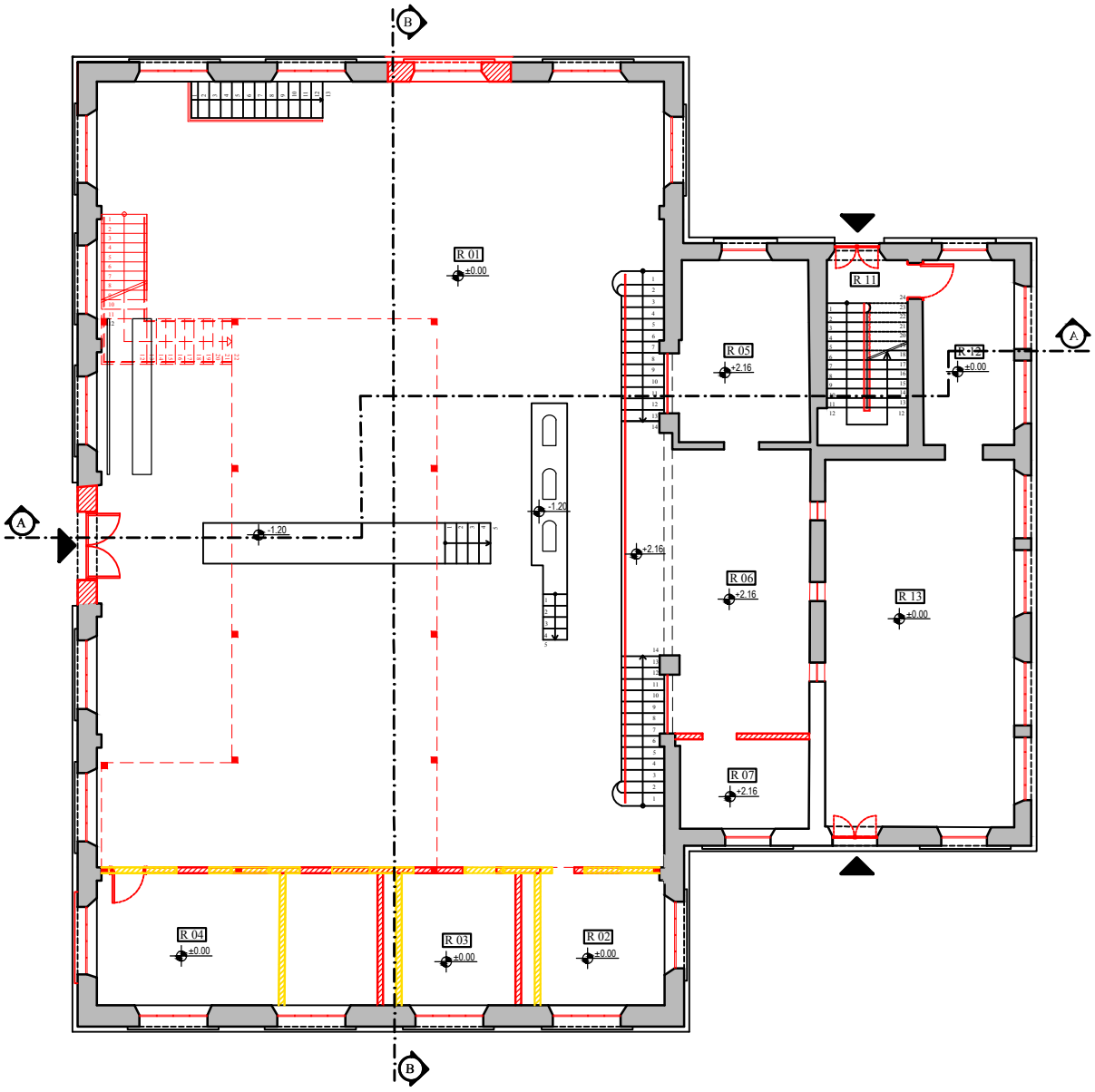
INTERVENTION

SHEET NAME:	INTERIOR 2
SHEET NUMBER:	**42**

GROUND FLOOR

101

INTERVENTION LIST



LEGEND OF INTERVENTION

NEW CONSTRACTION

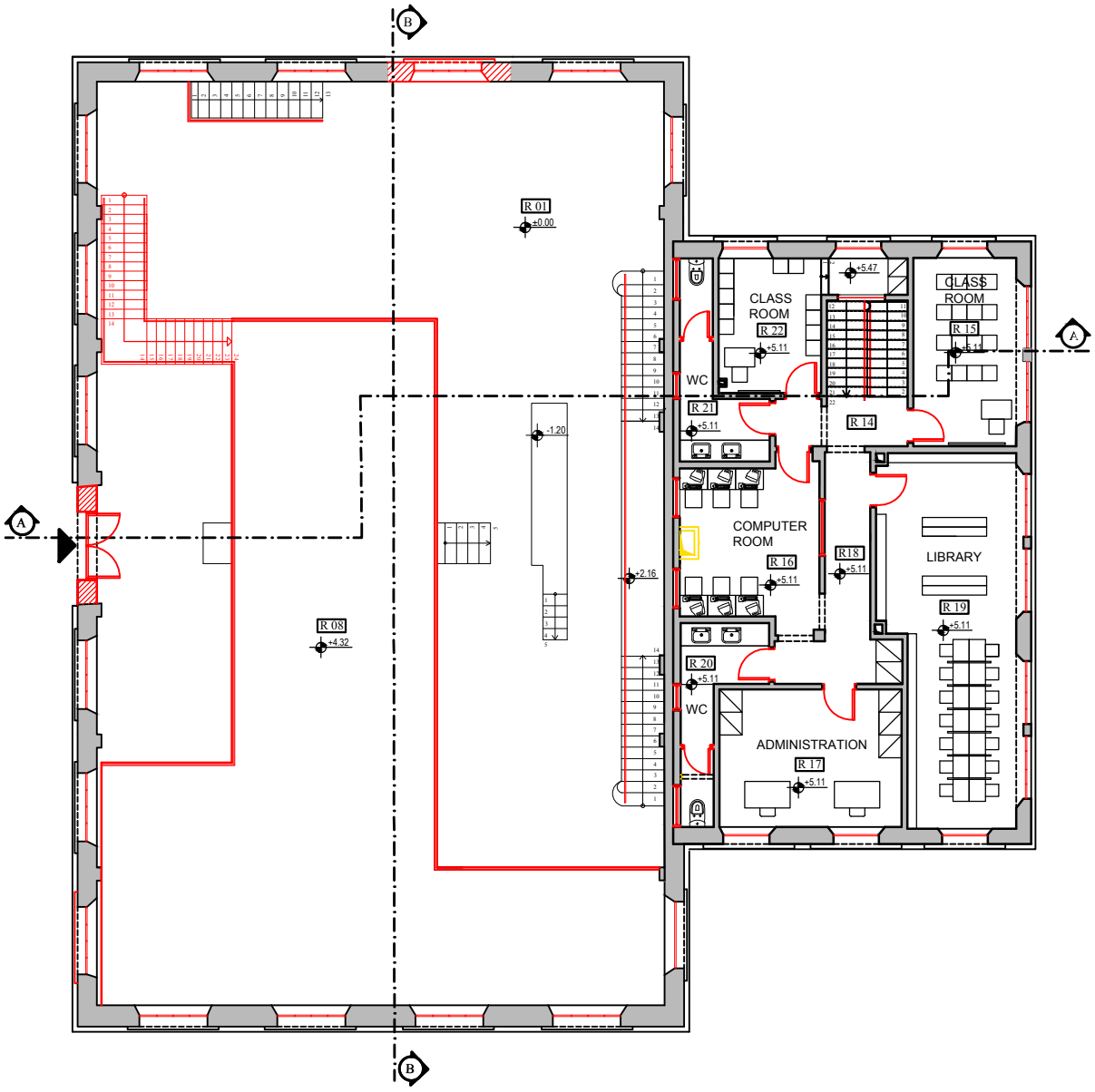
DEMOLISHED

0 1 2 3 4 5 m

FIRST FLOOR

I02

INTERVENTION LIST



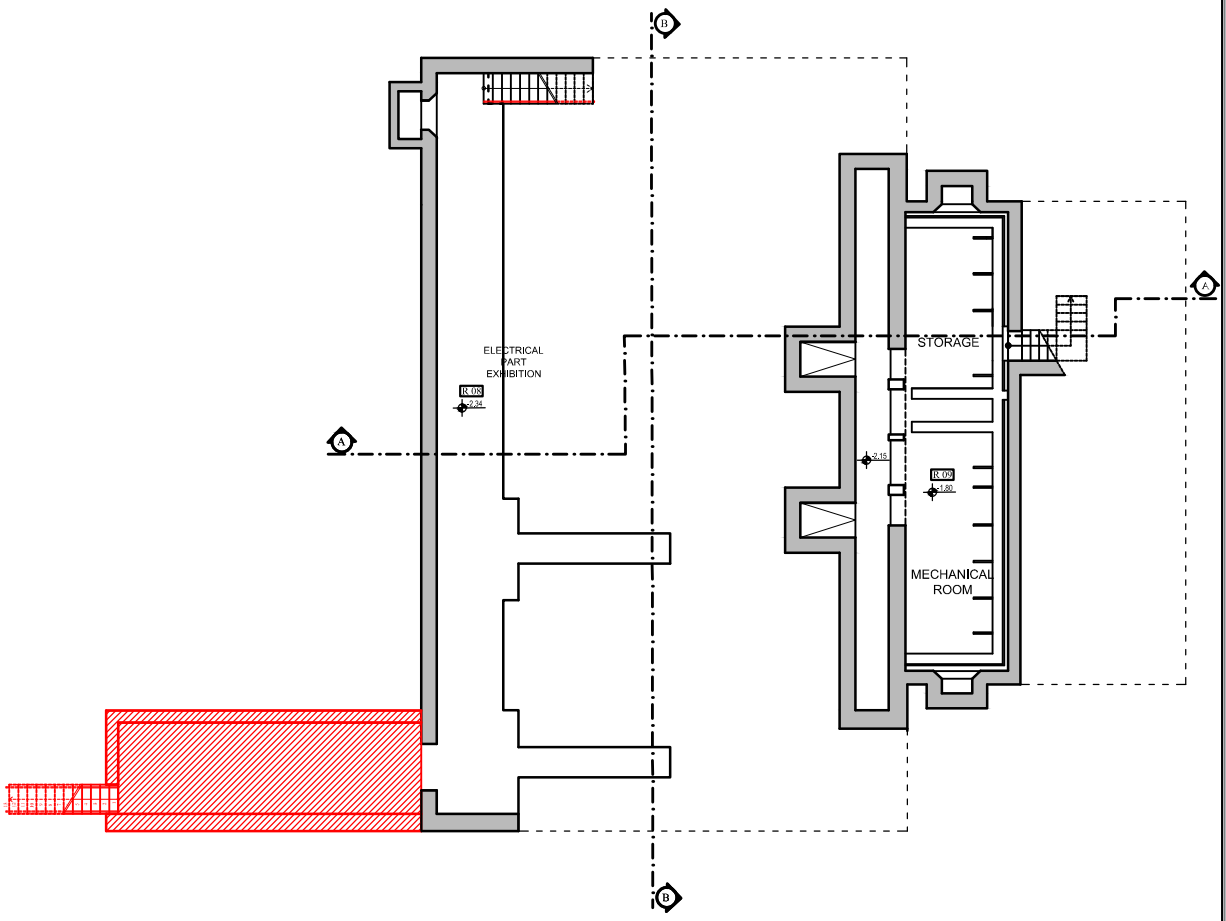
LEGEND OF INTERVENTION

NEW CONSTRACTION

DEMOLISHED

0 1 2 3 4 5 m

BASEMENT FLOOR



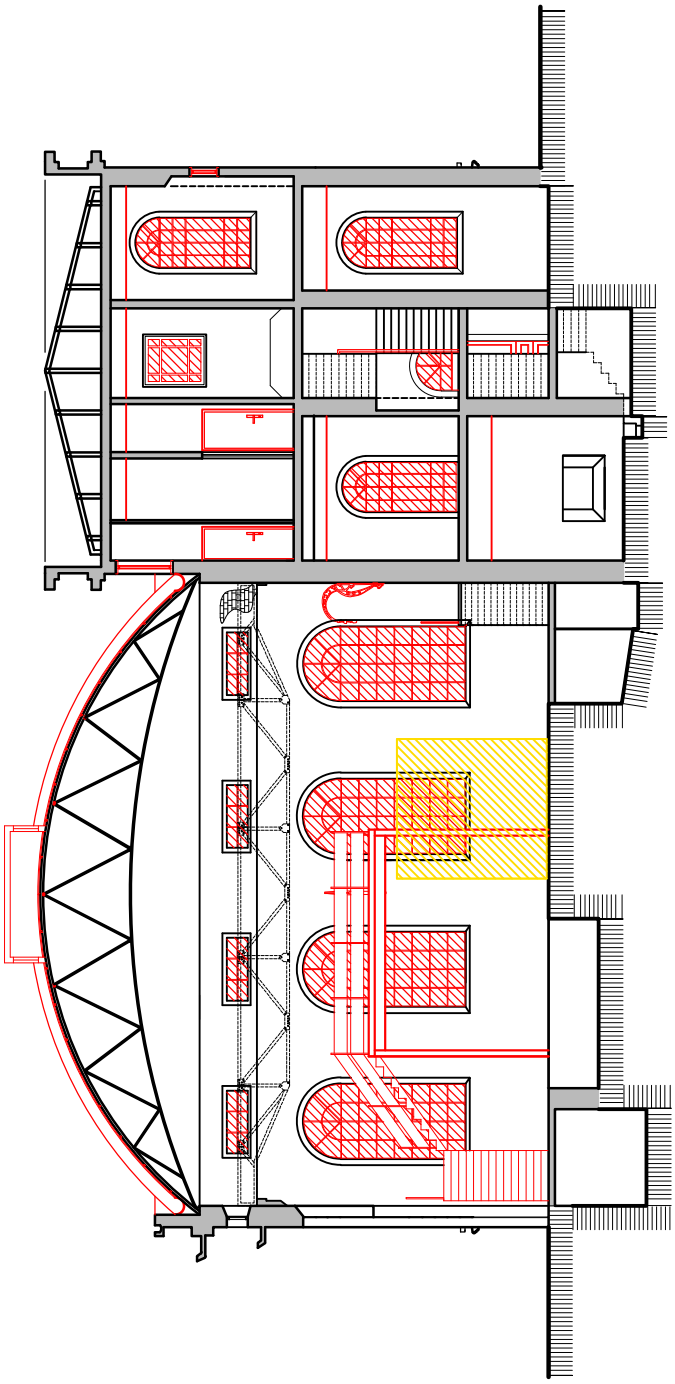
LEGEND OF INTERVENTION

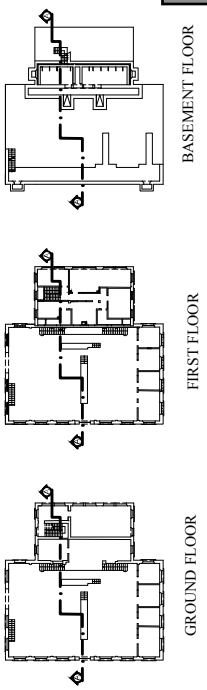
NEW CONSTRACTION

DEMOLISHED

0 1 2 3 4 5 m

SECTION A-A





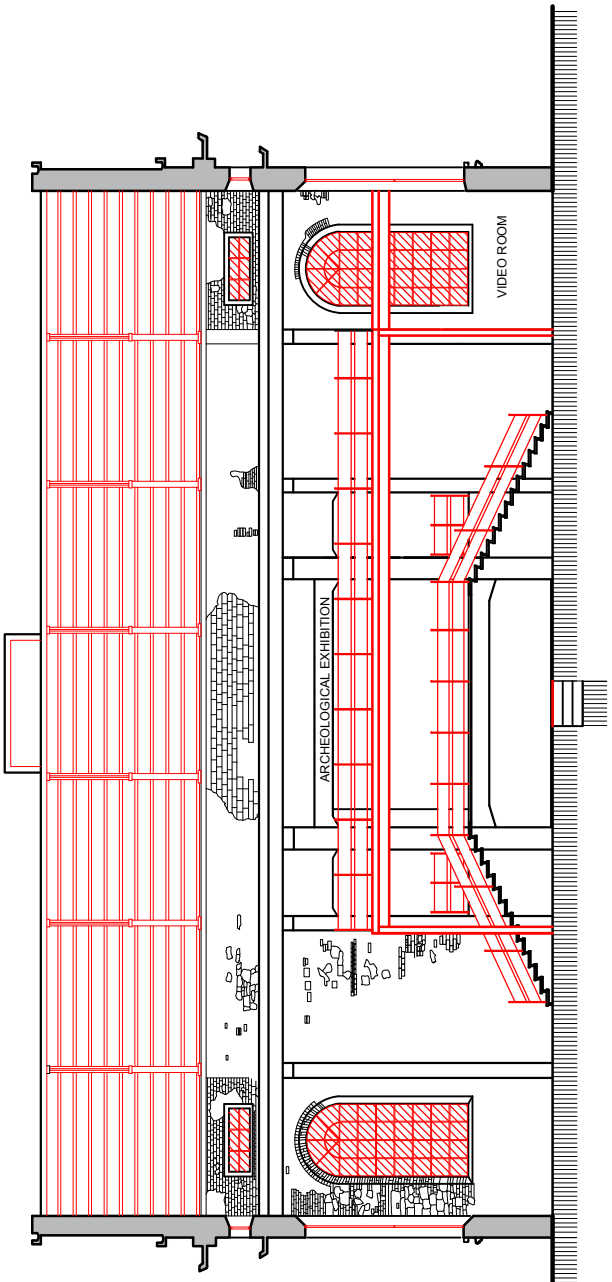
LEGEND OF INTERVENTION

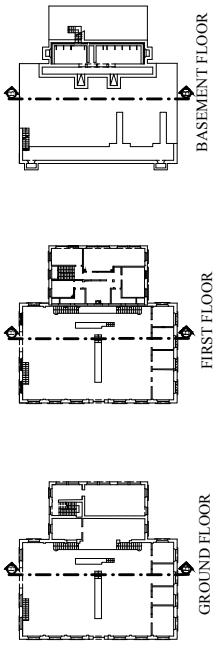
NEW CONSTRACTION

DEMOLISHED

0 1 2 3 4 5 m

SECTION B-B





LEGEND OF INTERVENTION

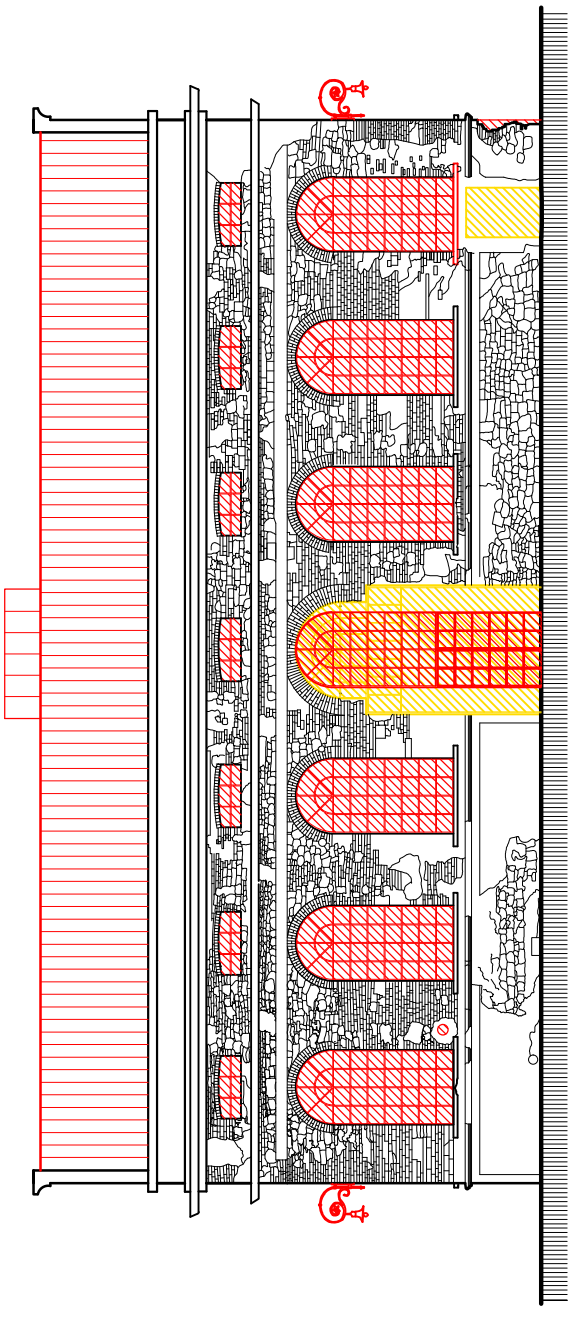
NEW CONSTRACTION

DEMOLISHED

0 1 2 3 4 5 m

SOUTHWEST ELEVATION

106



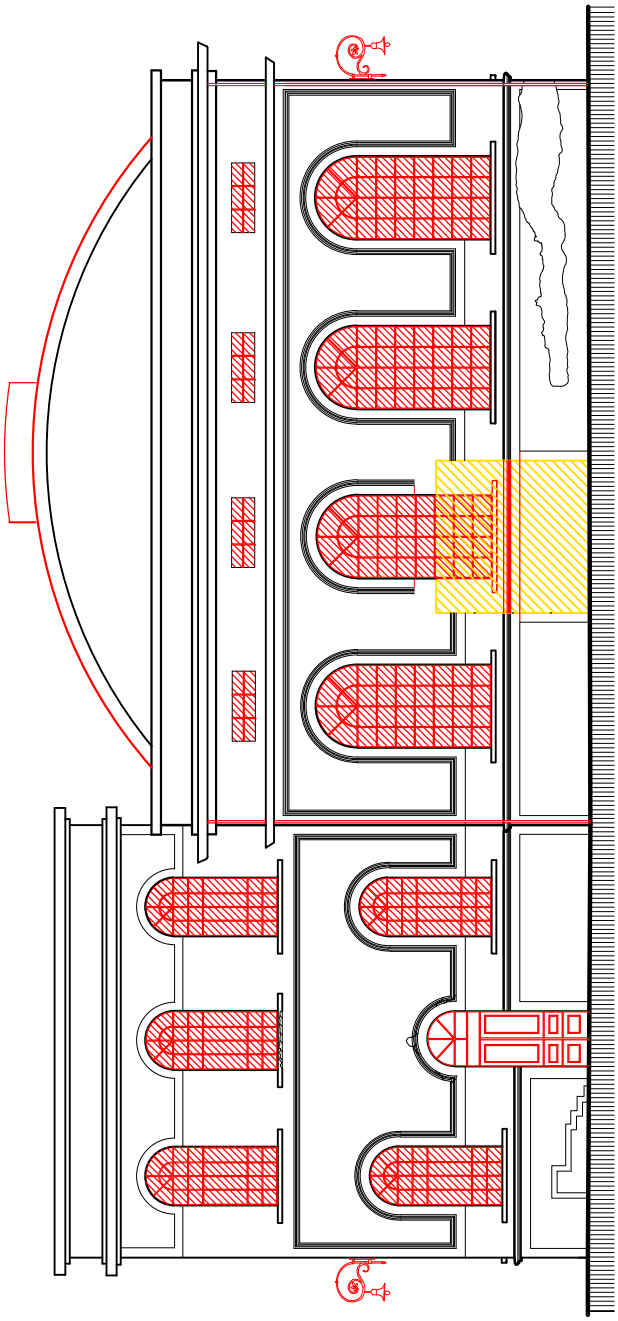
LEGEND OF INTERVENTION

NEW CONSTRACTION

DEMOLISHED

0 1 2 3 4 5 m

NORTHWEST ELEVATION



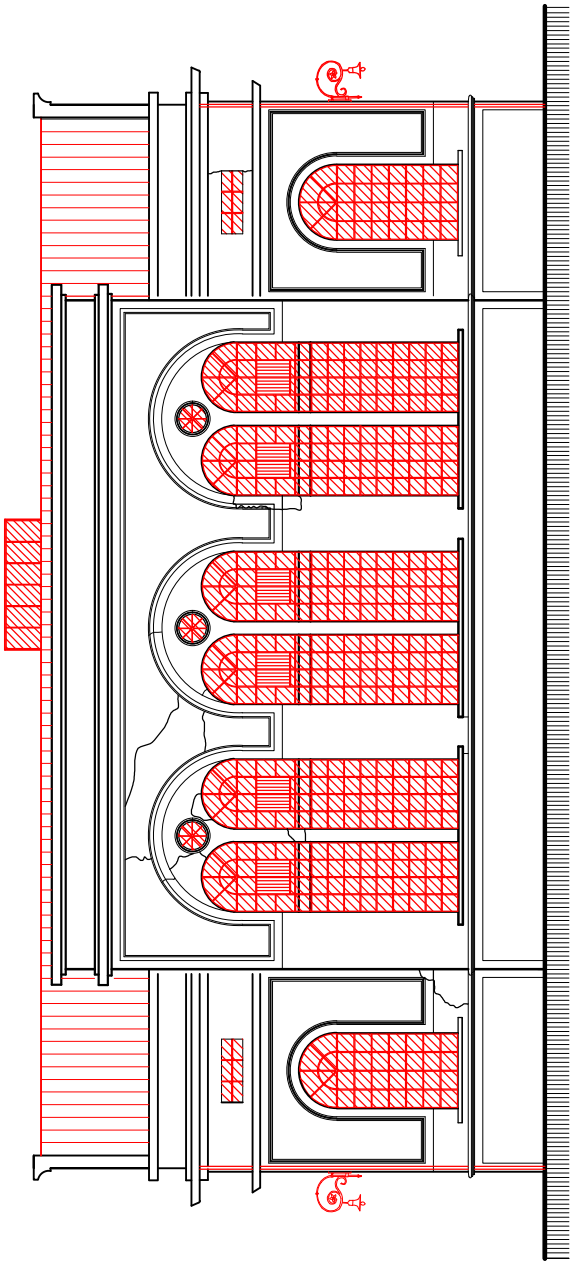
LEGEND OF INTERVENTION

NEW CONSTRACTION

DEMOLISHED

0 1 2 3 4 5 m

NORTHEAST ELEVATION



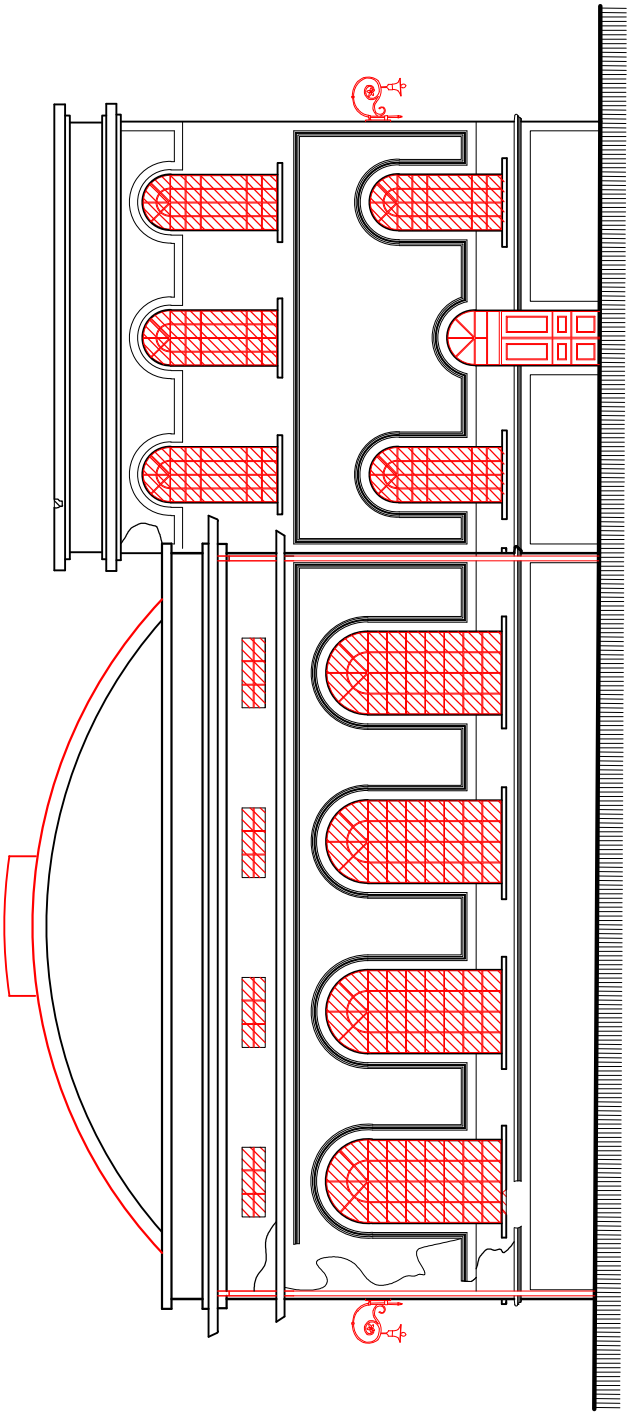
LEGEND OF INTERVENTION

NEW CONSTRACTION

DEMOLISHED

0 1 2 3 4 5 m

SOUTHEAST ELEVATION



LEGEND OF INTERVENTION

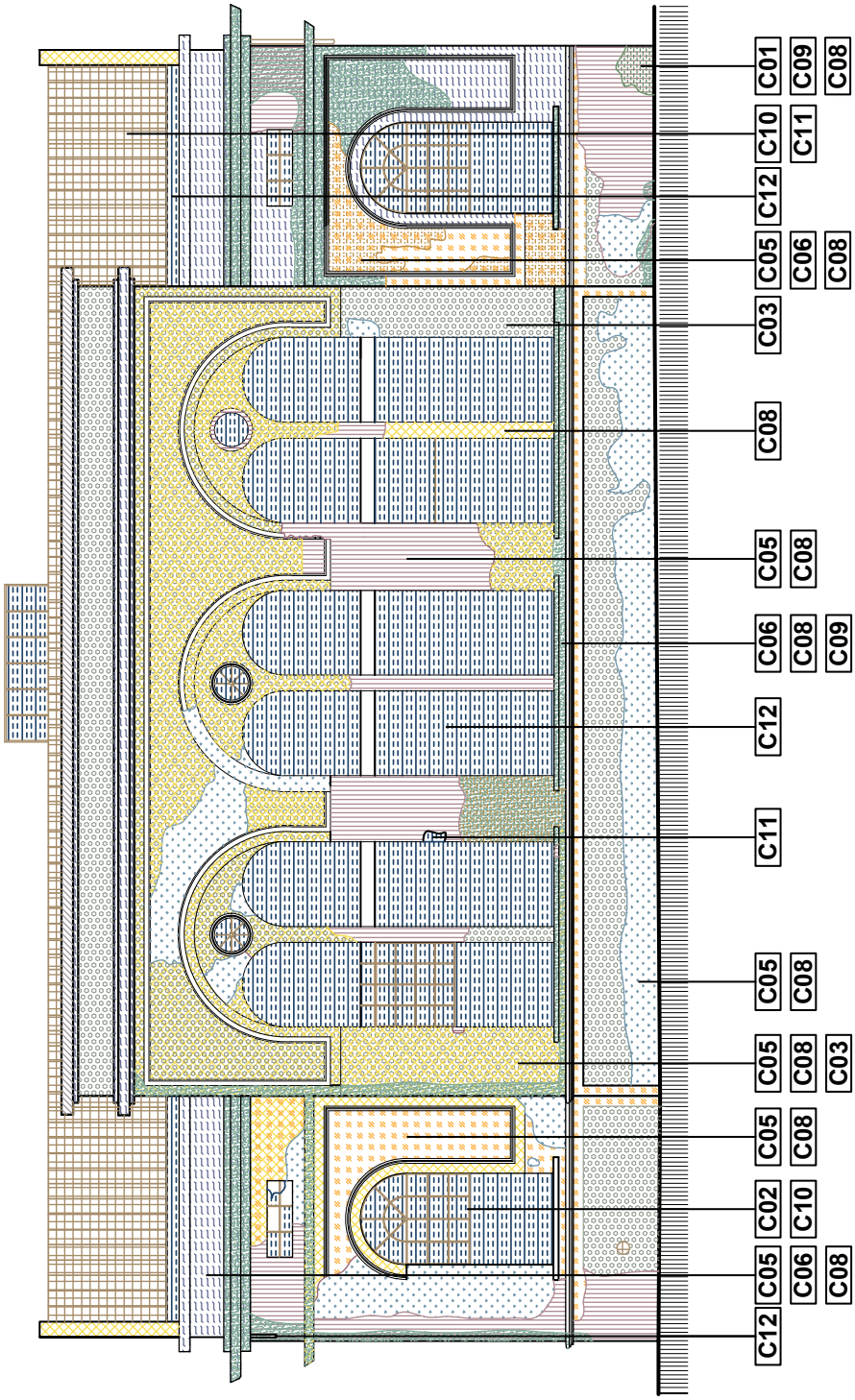
NEW CONSTRACTION

DEMOLISHED

0 1 2 3 4 5 m

NORTH-EAST ELEVATION

C01



CLEANING LIST

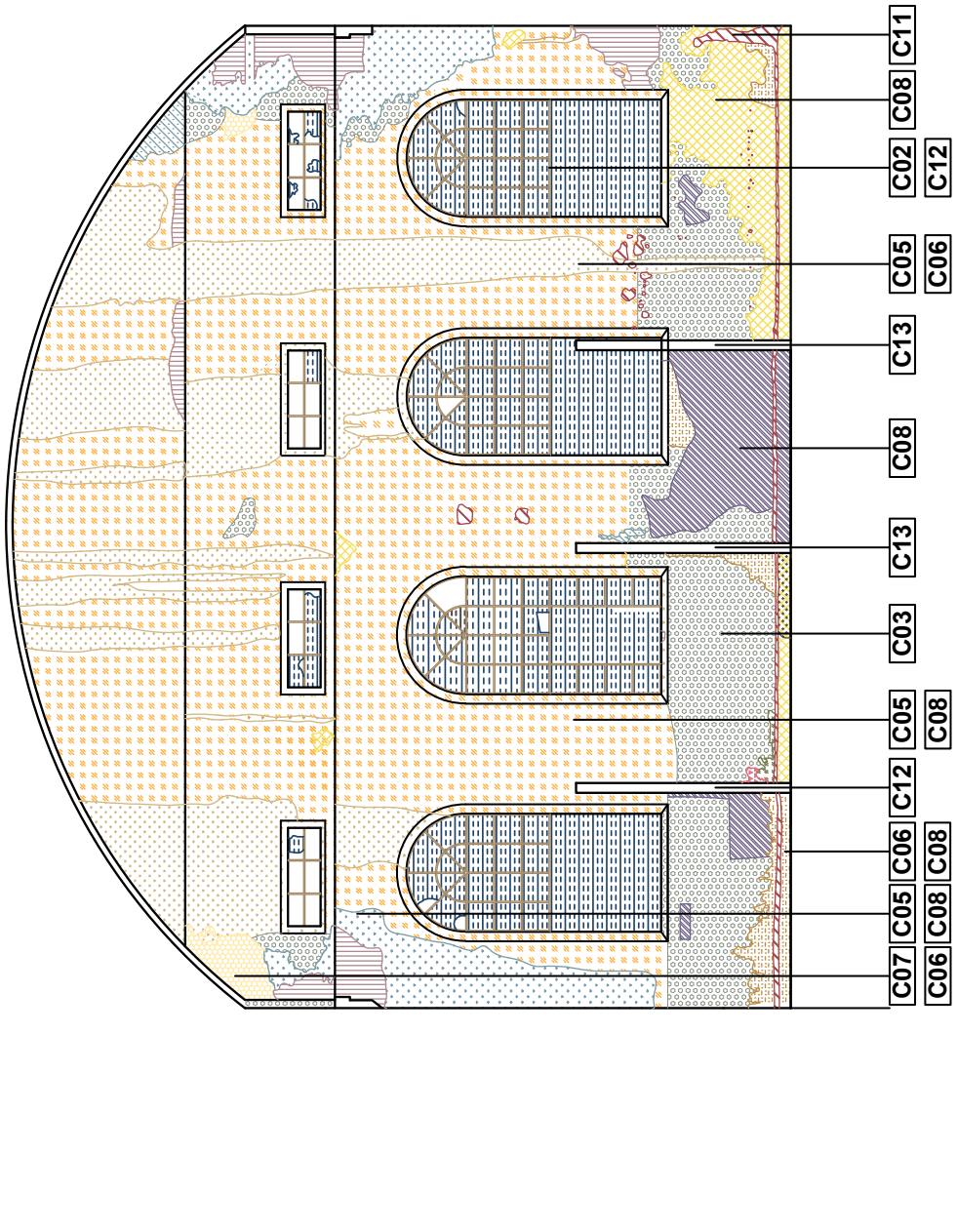
LEGEND OF CLEANING

C01	ELIMINATING WEEDS BY PULLING BRAKING
C02	REMOVAL OF LOOSE MATERIAL WITH SMALL CHISELS
C03	REMOVING PLASTER WITH SOFT BRUSHES AND SMALL TOOLS
C04	REMOVING PLASTER BY BLASTING CONTROLLED LOW PRESSURE
C05	CLEANING WITH COMPRESSED AIR AT LOW PRESSURE
C06	CLEANING SPRAY OF ATOMIZED WATER WITH DEIONIZED OR DISTILLED
C07	REMOVING THE AILEN LAYER
C08	MANUAL CLEANING WITH BRUSHES, RAGS OR CANISTER VACUUM CLEANER
C09	TREATMENT WITH WEED CONTROL PRODUCTS
C10	RUST CONVERTERS (PHOSPHORIC ACID SOLUTION CONTAINING METAL PHOSPHATES
C11	REPAIRING DAMAGE
C12	NEW STRUCTURE
C13	REMOVAL / DEMOLISHED

ROOM 01 - D04 WALL

C02

CLEANING LIST



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