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TECHNISCHE UNIVERSITÄT WIEN / VIENNA UNIVERSITY OF TECHNOLOGY
MASTERARBEIT

CONTEMPORARY MUSEUM SKOPJE
CONTEMPLATING THE VOID

AUSGEFÜHRT ZUM ZWECKE DER ERLANGUNG DES AKADEMISCHEN GRADES
EINES DIPLOM-INGENIEURS /DIPLOM-INGENIEURIN

UNTER DER LEITUNG

O.UNIV.PROF. DIPL.-ING. WILLIAM ALSOP
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SKOPJE - HISTORICAL OVERVIEW



Skopje is the capital of the Republic of Macedonia, stretching over an area of 1,854 km², with 668,518 citizens, with population density of 360.6/km² and housing almost one third of the total population of the country.

Being the largest city in the country, it is a political, economic, academic and cultural center of Macedonia. It is located at the upper course of the River Vardar, below the Vodno Mountain and is positioned on the intersection of two major routes: north-south route between Belgrade and Athens and the east-west route between Pristina and Sofia.

The area around the city is very rich in historical remains from different historical periods, although its development suffered many discontinuities due to imperial conquests and natural hazards: earthquakes and floods. Skopje is a modern city with a wide range of cultural monuments.

Statistically, the Skopje region officially numbers 571,000 inhabitants (2002). However, the unofficial numbers extend to around 700,000. The city is also a center for metal-processing, chemical, timber, textile, leather, and printing industries. The industrial development of the city has been accompanied by development of the trade, logistics, banking sectors, as well as strong growth in the areas of culture and sport.

The first well established larger town in Roman times, located near today's Skopje, was named Skupi. The historical remains are to be seen today. The old Roman town was destroyed in an earthquake in the year 518. No written sources account for the destiny of Skopje in the following three centuries. Towards the end of the 10th century, Tsar Samuil (974-1014) created the medieval Macedonian state. In that period, Skupi acquired an important role in the centralized state and the merchants from Skopje established trade contacts with the neighboring as well as the towns along the Adriatic coast. Shortly after, the town fell in the hands of the Byzantine Empire. In 1282 the town was conquered by the Serbs. The ruler of the medieval Serbian state, Tsar Dusan was crowned in Skopje in 1346. After that, Skopje acquired status of the capital of the Serbian Kingdom. However, the new Ottoman Empire rose in the East and expanded towards Europe. At the same time, some of the old medieval Christian states collapsed. On January 19th, 1392, Skopje fell under the Turks. The town was given a new name – Üsküp, and it remained under the Ottoman domination together with the rest of the country, for whole 5 centuries. After the Kosovo battle, Skopje was temporarily the capital of the Ottoman Empire. In 1515, another heavy earthquake destroyed a part of the town.



During the 17th century the city flourished until 1683 when the city was again destroyed but this time by an immense fire. In 1689 the Austrian General Enea Silvio Piccolomini http://en.wikipedia.org/wiki/General_Enea_Silvio_Piccolomini led an army to overtake the Macedonia region from the Ottoman Empire. During the attack the city of Skopje was plagued by epidemics of cholera. To prevent the outburst of the disease, or by other accounts, to retaliate for the siege of Vienna, General Piccolomini ordered the city to be burned. Before the fire the city had 60 000 inhabitants, after the destruction only 4000-6000 people left. Up until middle 19th century, there was hardly any development noticeable. In 1876 the railway lines Kosovska Mitrovica-Skopje-Thesalloniki and Belgrade-Skopje-Thesalloniki were developed and these came to be the main supporters of the new urban development of the city of Skopje. The following are the numbers of inhabitants of the city as marked in records: 15.000 inhabitants in 1840, 37.000 in 1912. In the period 1912 until 1963 several regulation plans were being adopted, Leko's urban plan in 1914, Mihajlovic's general plan in 1929 and Kubes's plan in 1948.

In 1912 Skopje was conquered by the Serbs in the Balkan Wars. During the First World War, the town was first in the hands of the Bulgarian in 1915 and then of the Serbian army in 1918. After this period the town belonged to the Kingdom of Serbs, Croatian and Slovenian that later changed its name to the Kingdom of Yugoslavia.

In the II World War Skopje was again in the hands of the fascistic Bulgaria in the period 1941 and 1944. Upon the uprising in 1945, Skopje became the capital of the Socialistic Republic Macedonia as a part of Yugoslavia. The city developed rapidly after World War II, but this trend was interrupted in 1963 when it was hit by another disastrous earthquake. After the earthquake's demolition and following the urban design project by the architect Kenzo Tange, Skopje evolved into a modern metropolis with a completely new outlook and a wide range of architectural monuments. Skopje has been the Capital of the independent country of the Republic of Macedonia since 1991.

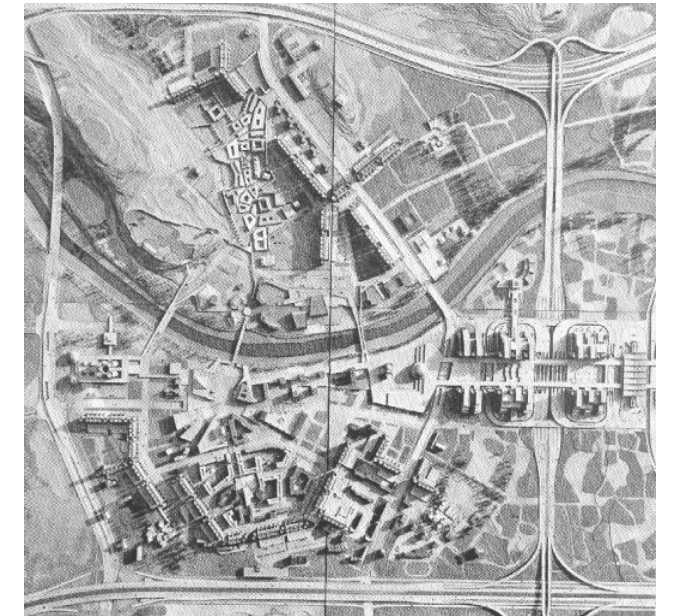


SKOPJE 26/07/1963 – THE EARTHQUAKE

26/07/1963, 5:17 AM, Skopje was struck by a devastating earthquake whose epicenter was in the town itself and with a 6,1 moment magnitude (equivalent to 6.9 on the Richter scale). It had already been known that Skopje had suffered many earthquakes written in its history. In the year 518 the ancient Skupi was destroyed by an earthquake, after which the city was relocated at another position also being destroyed in 1555 and again by an earthquake.



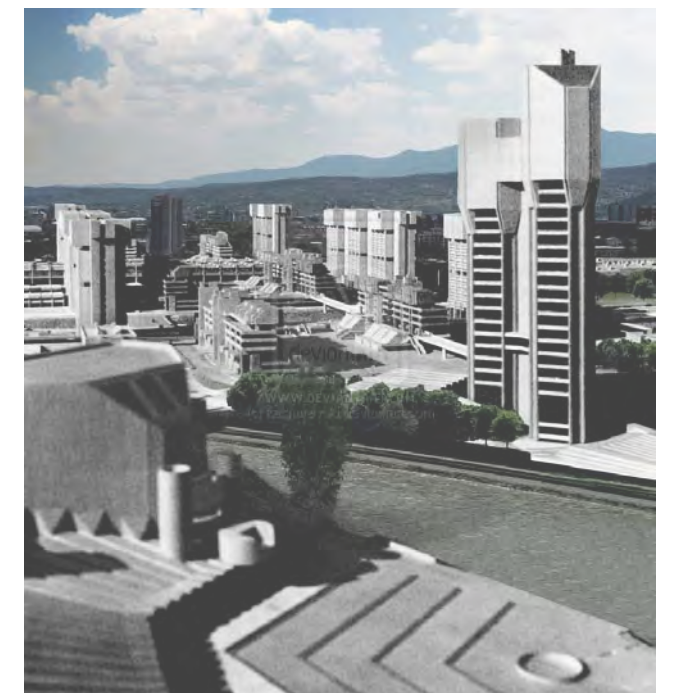
However, the renewal of the city could not be prolonged. Houses for 40.000 people were being built in the first 18 months after the earthquake. Many countries donated emergency assistance used to build 11 schools, 16 health institutions, 11 buildings for social care and many others. Skopje became the city of solidarity.



The 1963 earthquake was responsible for the death of 1070 people, 3000 were injured out of which 1200 remained disabled. Over 200,000 inhabitants lost their homes. About 80 percent of the city was destroyed. The day the destruction hit the city had 35.536 homes, out of which only 3.300 could undergo minor reconstructions and were suitable for living. Many public buildings were ruined including the Railway station, the main Bank, the Postal office, the Macedonian theatre, parts from the University buildings, many hotels, most of the primary and secondary schools, museums, cinemas, health institutions etc. The seismic hazard became reality in the capital of former SR Macedonia, then part of SFR Yugoslavia.



Experts from Doxadis Associates from Greece, Polservis from Poland and Urbanism Institutions from Skopje gathered together to create the new basic urban plan for more intensive development of the city. The Japanese architect Kenzo Tange and Croatian architects Mistic and Vencler won the competition for the city center. According to their design, the 19th variant was the final one and was the main perspective for building the city center. The new city symbols started to occur, the Transportation Centre, the City Wall, the City Gate etc.



THE RAILWAY STATION-MUSEUM OD THE CITY OF SKOPJE

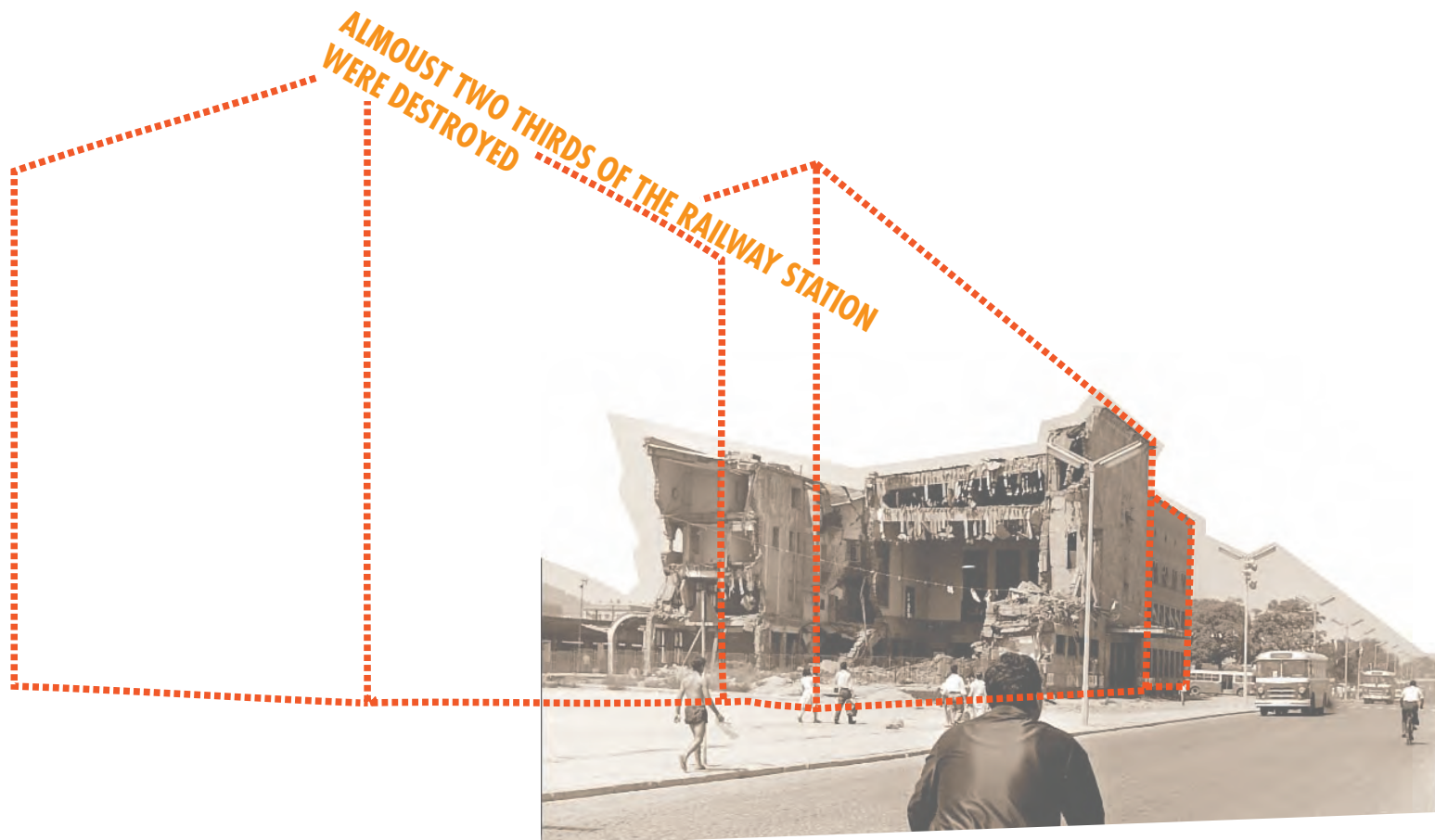
The first railway station in Skopje was built in 1873 during the Ottoman Empire in a neoclassical style.

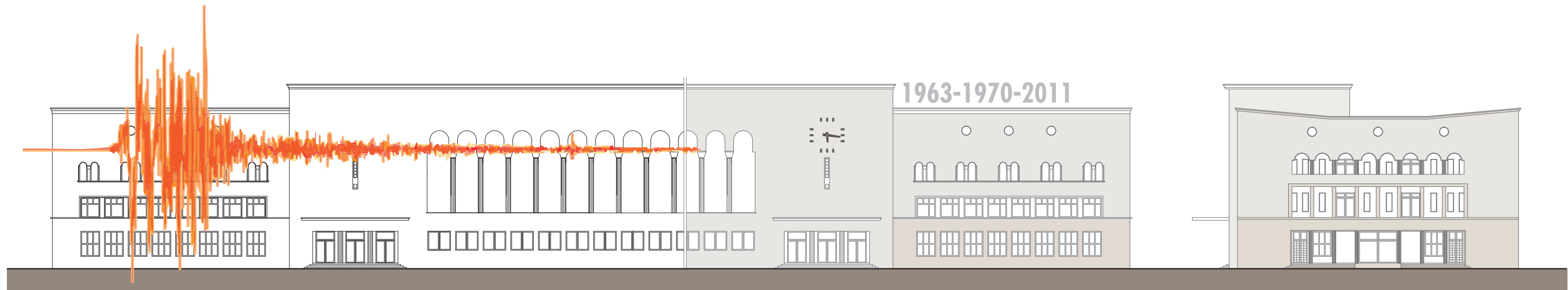


The construction of the "new" railway station began in 1937 and was finished in 1940, on December 1st when the building was officially open for public. From 1873 up until 1965 this location was the city transportation center. With the general regulation plan from 1965 the transportation center was removed at the eastern part of the city.



During the 1963 earthquake was partly damaged, and today it's remains are representing a monument of that catastrophe of the city.



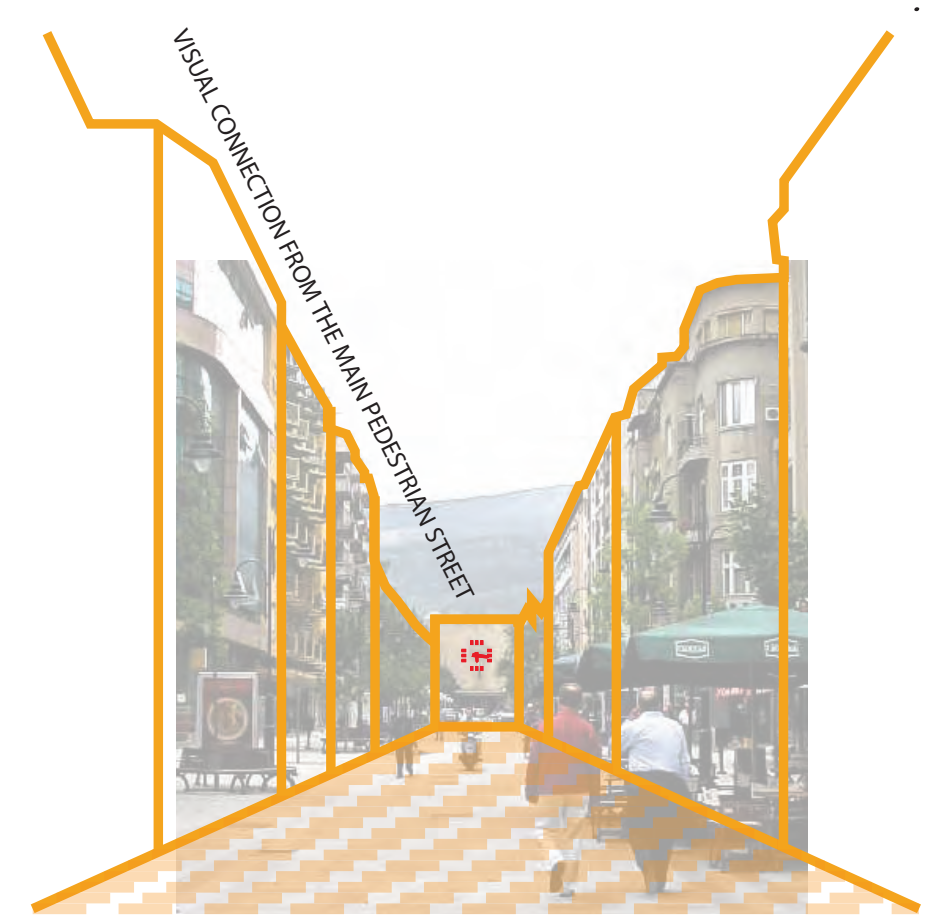
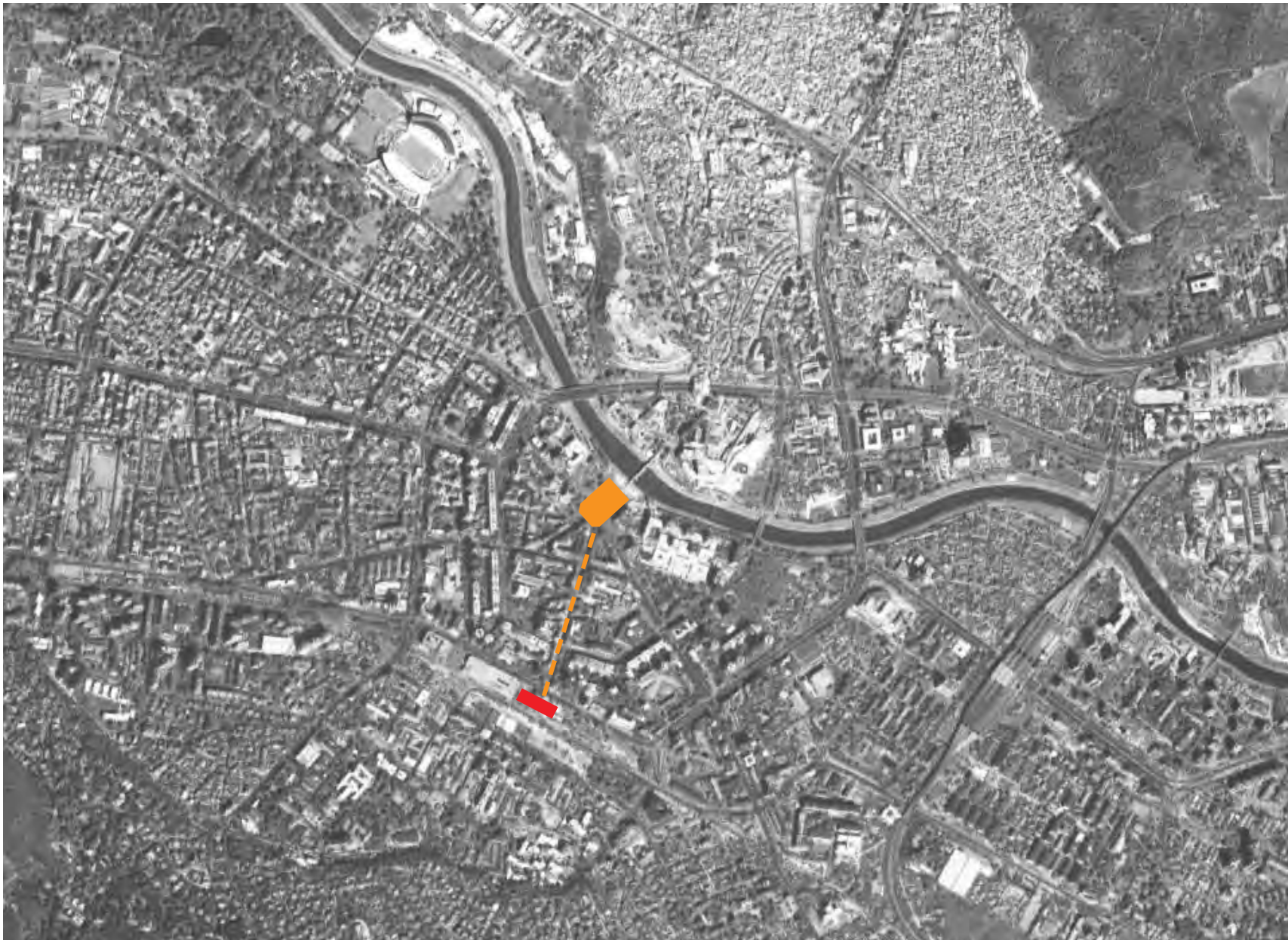


Since 1970 in it, is situated the Museum of the City Skopje, instituted in 1949. It was adapted into a museum and now it engages 4000 m²; 2500 m² are planned for the permanent display (representing the history of Skopje from the first recorded settlements around 3000 BC to present) and 800 m² are used as a gallery for temporary exhibitions.



Located near the city center, which is being defined by the square Macedonia, the core of the city, i.e. the natural barrier – river Vardar, and the main pedestrian streets out of which the most frequent one, the street Macedonia leads directly to the Old Railway Station or the location of the new museum.

This street is a historical axis of the city of Skopje. It was opened in 1911 when the sultan Mehmed Reshad the Vth visited Skopje and paraded from the Old Railway Station through the main square to the city park. At that time the street was named “Jeni Sokak”. The first car in Skopje, brought in parts at the railway station, was driven at this street. This was the street that generated the first neighborhoods on the right side of the river Vardar, the “Gazi Mentesh maalo”.



Today this street is the most famous pedestrian street in the city. It connects the main square and the site. However, the main problem is that this street does not continue to the southern parts of the city. Namely, the Old Railway Station is its endpoint or better said starting point. This city south-north spatial axis is starting (ending) from the station, then going straight to the main square, transiting beside the most famous landmarks of Skopje, the Ristik Palace, the recently built House of Mother Teresa, than crossing the river through the most famous Stone bridge, and finally penetrating the Old Bazaar. It represents a line, a pedestrian path and the most attractive tourist promenade to which the most famous historical landmarks of Skopje are being attached.



■ LOCATION
 ■ SQUARE "MACEDONIA"
 ■ RIVER VARDAR
 - - - PEDESTRIAN MOVEMENT
 — TRAFFIC

From a spatial aspect and on a larger scale, the location is the southern tangent of the city center or the "small ring", almost halfway from the city center and the recreational park-forest Vodno.

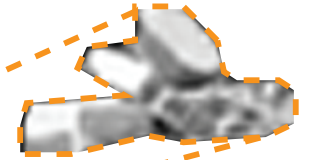
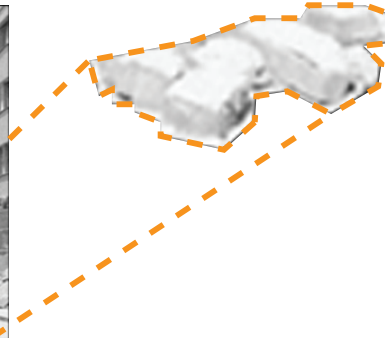
Except of the Old Railway station and the recently built shopping mall Ramstore, the citizens of Skopje cannot associate with any other landmark on the location. The new shopping mall building is very introvert, it does not make any use of the space around it and even more importantly, it does not contribute to the social life. The Old Railway Station building, nowadays Museum of the city of Skopje, standing as a memorial of the catastrophe of '63, is used for cultural events and mostly artistic exhibitions. The building has historical and cultural meaning for the city; it connects many generations and reveals the memory of some other time, some other period and some other people.

There are no public places on the site, except of one mini green children amusement park being occasionally used. After almost 50 years, there is no urban composition on a larger scale built to strengthen the urban picture and finally create a coherent context. The location is being developed with only few points serving as buildings for themselves.

As a conclusion it can be said that this fragment of the city is an urban void which can be compared with the main square Macedonia. Both unconstructed spaces, urban voids with different functions. The main square is mainly for social gatherings, manifestations, big music concerts, election meetings etc. With the fully usable connection, the street Macedonia, the duality between these two spaces exists.



The pedestrian paths through the location supposed to be used to connect the city center and the housing units on the south of the location and more importantly to connect the city center with the nature, i.e. the mountain Vodno, the main recreational center in Skopje, are still not developed. Longitudinal movements of the site directing east-west are with high intensity, but mostly car traffic. The cross movements directing towards north-east are very low, especially the pedestrians movements. Today the location of the old railway station, nowadays Museum of the city of Skopje, and its surrounding is a place with no identity, with critical urban picture, undefined urban structure and not much accessible. The site is a disintegrated fragment of the city, never fully built, lacking in program, no function and no content that might keep ones attention. It is limited by two big boundaries - two city streets which are high in intensity.

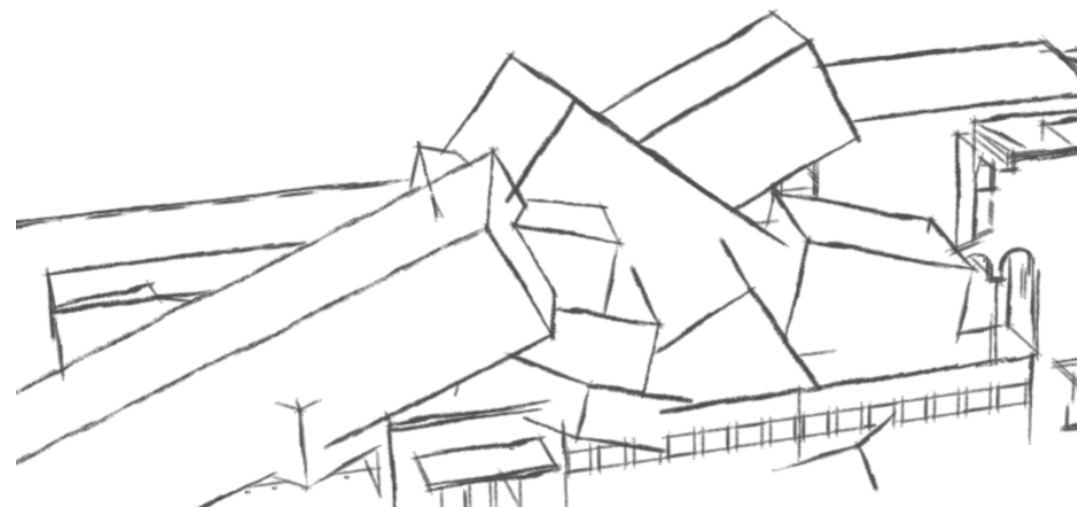


In this complex context, the design approach was very delicate. Designing a building that should create an identity of the site, create a new city landmark, but not dominate over the other already known landmarks, generating social life, connecting to the context. It was an adventurous assignment.

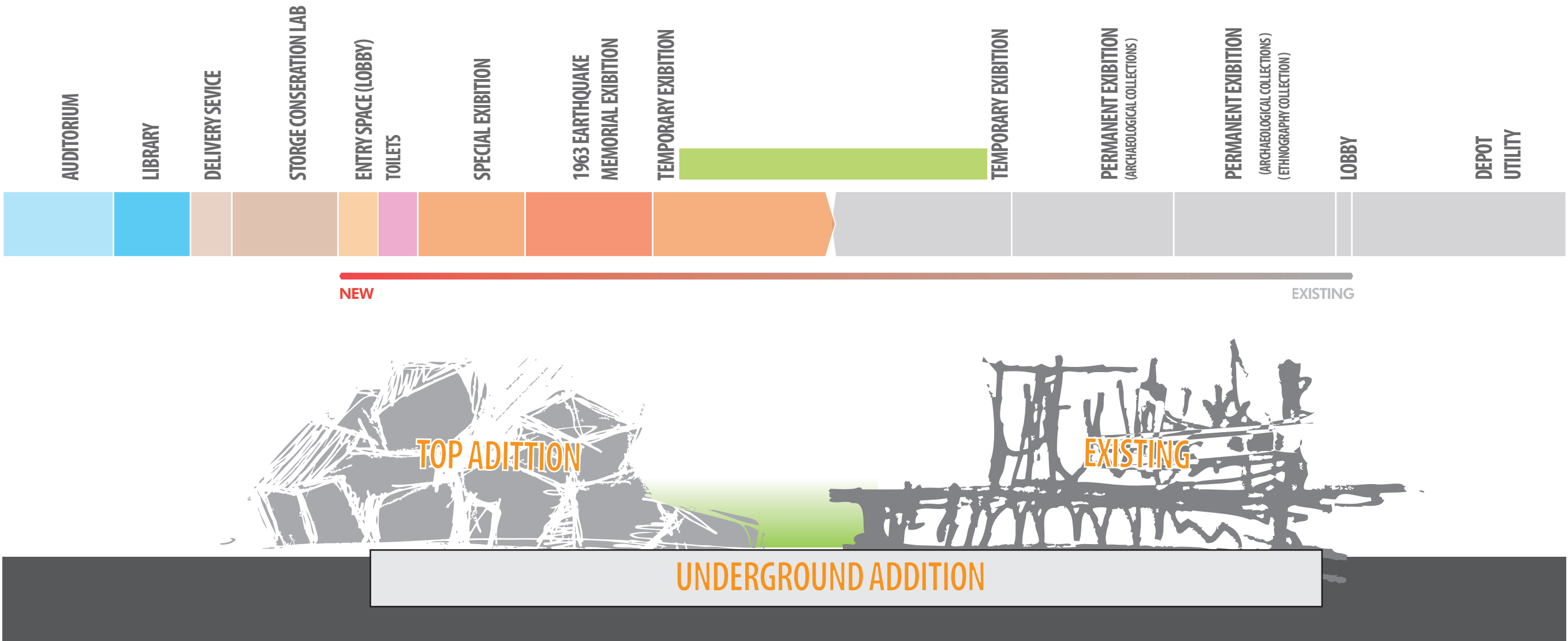
The Contemporary Museum Skopje is not designed to be a memorial of the earthquake, but rather narrate the story about it. To quote Libeskind : "The building is not saying whether it is a good or a bad story, it is more a conversation and a dialogue with the visitors. The conversation is as complex as the history is. Architectural space has to be part of the story if it's trying to communicate. Dynamic spaces are inviting the visitors even before entering".

The uncertainty about the survival of members of their families is being brought up through the curiosity of the unknown spaces. The analogy of the lost ruined homes is successfully achieved with the dynamic forms, not positioned in particular order. The moment of happiness, finding a neighbor, a member of the family under the ruins is being transferred with the elements of surprise.

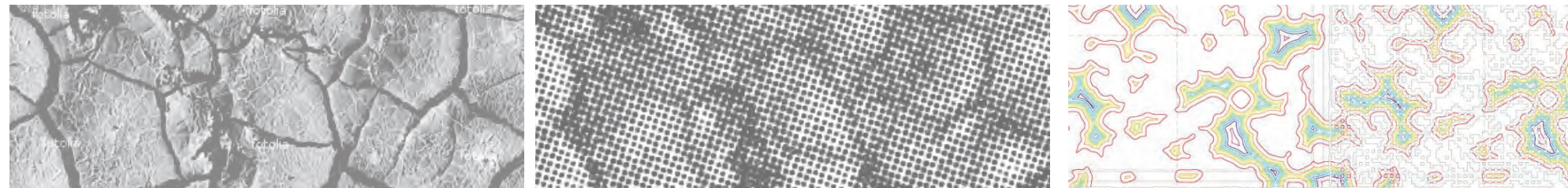
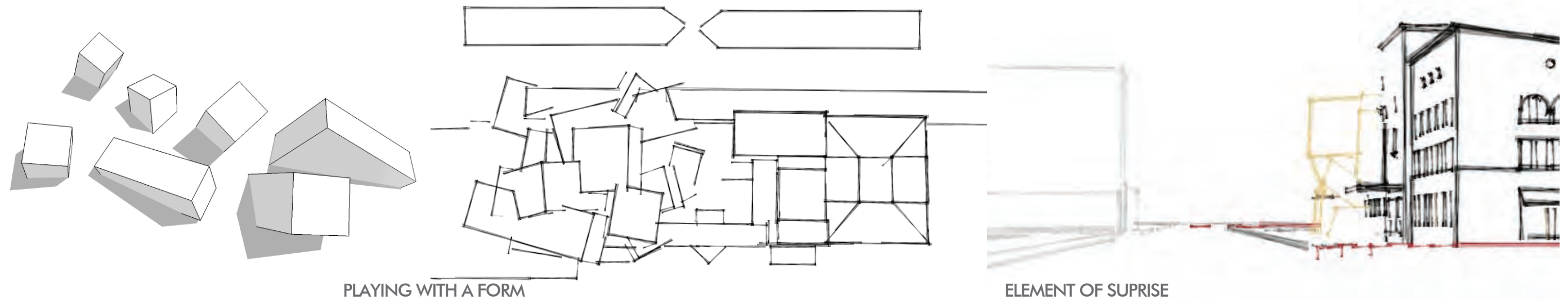
The inspiration was found in the ruins of the buildings but in a positive way. How to generate life in a ruin-like form? How to revive a ruin? How to create usable space in a "ruin"? It was a challenge accepted.



The Contemporary Museum Skopje is an extension of the Old Railway Station (Museum of the city of Skopje), connected in the underground with the spaces for temporary exhibitions. On the ground floor the two buildings are also connected with the open public space between them, also being an event space, additionally giving space to be used occasionally for different manifestations or at any time as a public space.

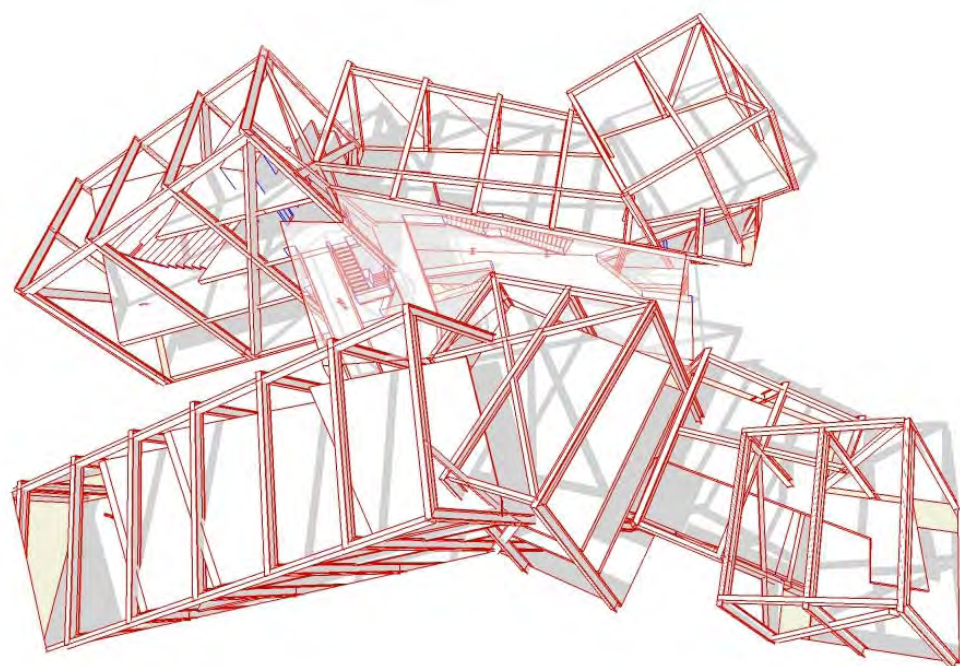
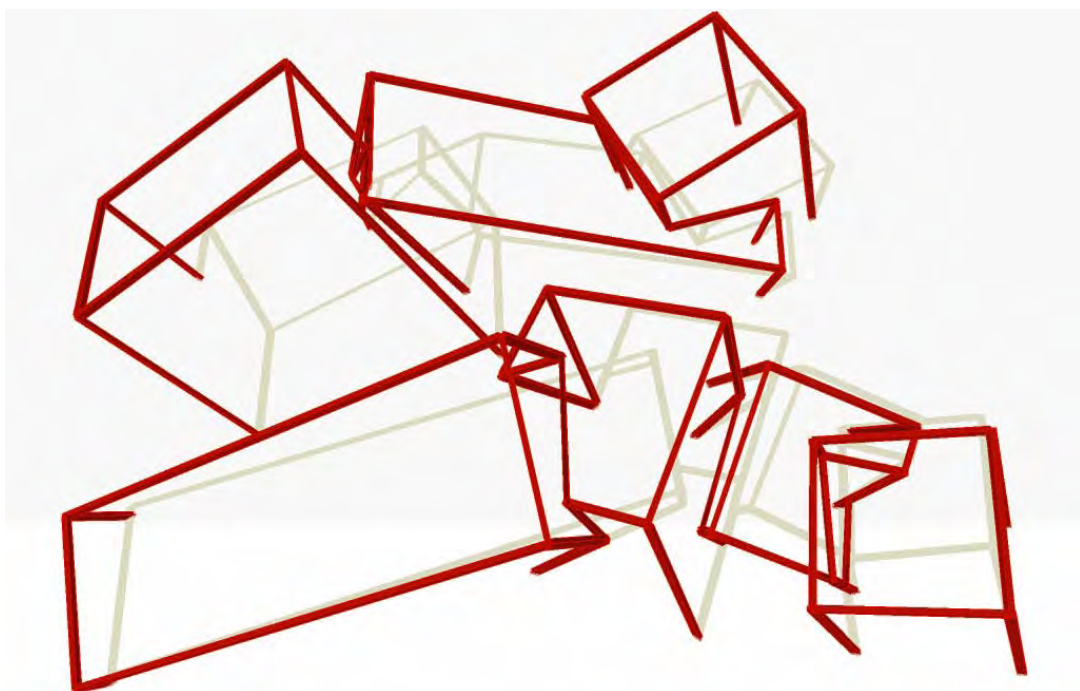
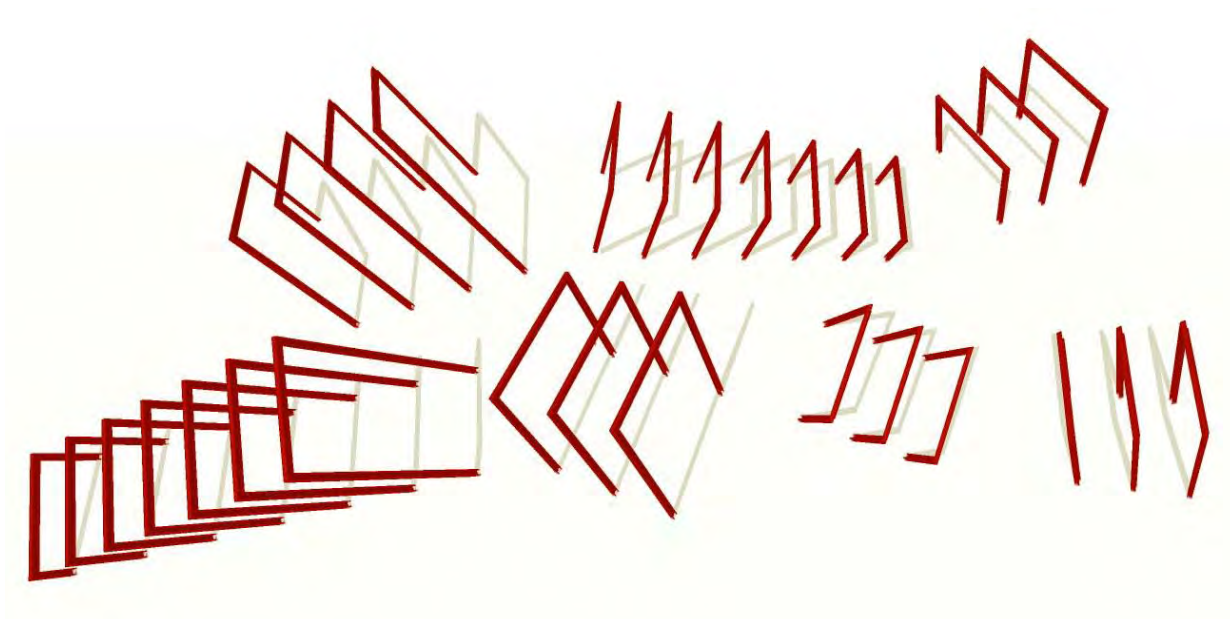


The contact between the building and the ground floor is unpredictable. The trembling contact is being designed with the narrow surfaces of the building and also with the white sand which is distributed all around the perimeter of the building. With this approach, the analogy with the actual ruins from the Old Railway Station which happened to be on the exact place where the new museum is today is achieved. The uncertainty between the ruins, not experiencing any straight vertical or horizontal line, not having a clue if you are at a ruin or at the ground are the main feelings that are supposed to be felt today. These experiences are the main generators of the form.

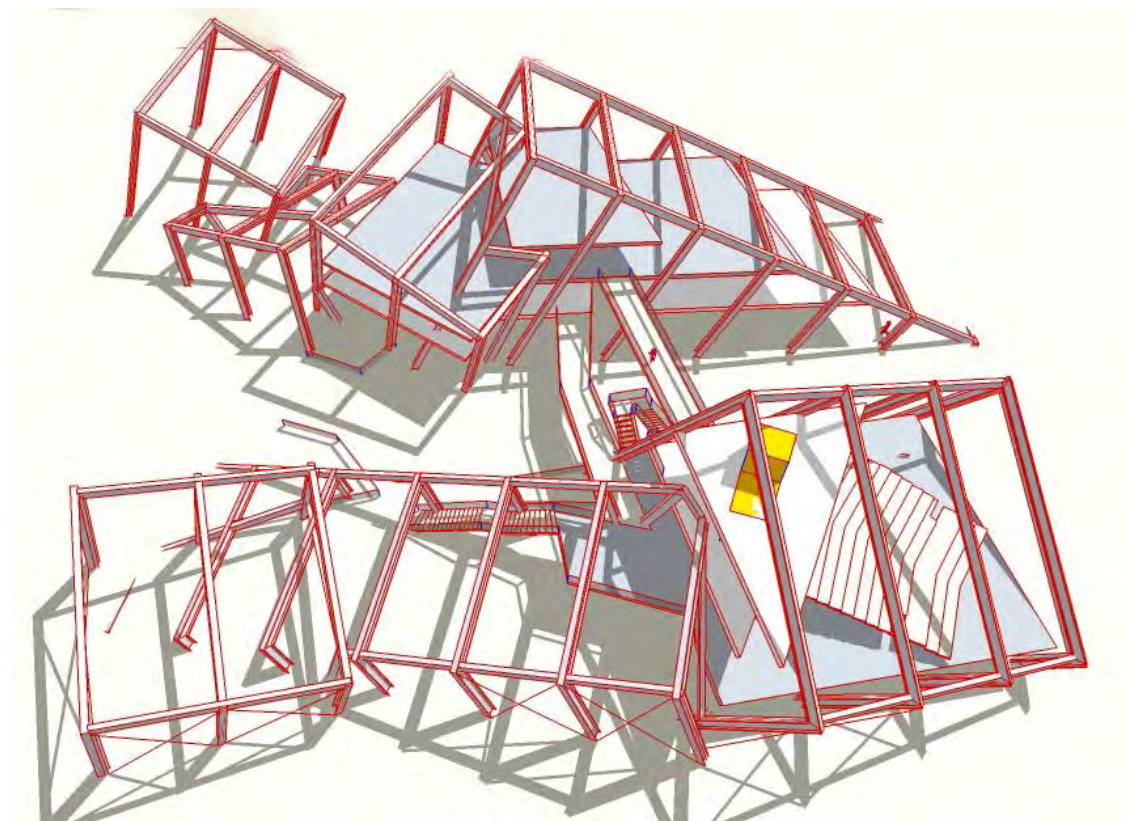


GENERATING A FACADE PATTERN

The Contemporary Museum Skopje is “closed” toward the high intensity street in front of it. This is being made so that the spaces between the old and new building MUST be used. At the eastern side of the site, where the main entrance is, the design method used at the building is intentionally not used into the landscape design, so that the building design can dominate. On this side, landscape with water and greenery is proposed. With these spaces being created, it is expected that social and cultural life will be generated, because places are created, space is converted into semi-public places. Space is converted into place. On the inside, the building is a serial of several open spaces, with a visual communication between every space and every room. Even from the main entrance, your view can penetrate through the whole building and the impressive words from the old building’s wall can be seen. With this, the respect for the already built structure is being shown. Seen as a whole with only one step on the inside, and on the contrary as many different parts in a deconstructive style on the outside, it creates a whole new experience.



FRAMEWORK STRUCTURE



On the underground level the old and new museum are connected with an open space for temporary exhibition. Both entrances from the old and the new museum can be used for a particular exhibition, show or occasional manifestation. On this ground floor a café restaurant with a dining terrace as well as art storage, delivery ramp, and mechanical rooms are being positioned.

On the ground level the main entrance is designed through a bridge, so that light can be delivered to the restaurant at the underground level. Museum gift shop, and several other rooms for special exhibitions and permanent exhibitions are being situated around the main lobby.

On the upper level the auditorium and the seminar room is being isolated from the exhibition area. Library is positioned in this more calm and quiet space.

On the highest level the museum administration and offices are settled.

The rusty perforated façade panels are creating a vibrating and daily changeable shadow and light cohesion.

The reflection of modern times and technologies contrasts with the old functionality of the building, perceived as an organic balance with the esthetic content.

The construction of the building is generated from a complex metal framework.

The interior elements and the details are designed with a innovative approach as the concept of the form.

Galić, R. Skopje Urbanistički plan. NIP Nova Makedonija:Skopje, 1968.

For this chapter were consulted different internet and printed sources, www.wikipedia.org, www.skopje.gov.mk, etc.

Galić, R. Skopje Urbanistički plan. NIP Nova Makedonija:Skopje, 1968.

Kocevski, D. Go sakam Skopje, Direkcija za kultura i umetnost: Skopje, 2000.

Edward Porter Alexander: Museums in motion: an introduction to the history and functions of museums. Rowman & Littlefield, 2008.

Stanley Saitowitz, "Natoma Architects - Tampa Museum of Art in Tampa, Florida", Archinnovations, <http://www.archinnovations.com/featured-projects/museums/stanley-saitowitz-natoma-architects-tampa-museum-of-art-in-tampa-florida/> 12. 01. 2011.

Paul Goldberger, Counterpoint: Daniel Libeskind. Birkhäuser: Basel, Boston, Berlin, 2008.

Cherry blossom

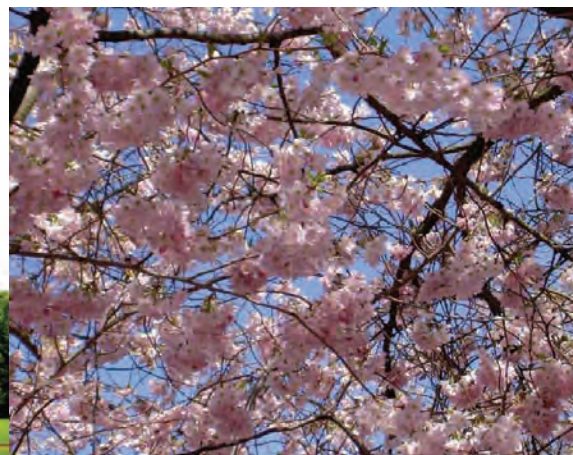
It is a small deciduous tree that at maturity grows to be 5-12 m (rarely 15 m) tall. It grows well in hardiness zones 5-8 and does well in full sun and moist but well-drained soil. The leaves are alternately arranged, 6-15 cm long and 4-7 cm broad, with a serrated margin; they are often bronze-toned when newly emerged, becoming dark green by summer. The flowers emerge before the leaves in early spring; they are fragrant, 3-3.5 cm diameter, with five white or pale pink petals. The flowers grow in clusters of five or six together. The fruit, a small cherry, is a globose drupe 8-10 mm in diameter; they are an important source of food for many small birds and mammals, including robins and thrushes. [1][2]

[1] Huxley, A., ed. (1992). New RHS Dictionary of Gardening. Macmillan ISBN 0-333-47494-5. [2] Rushforth, K. (1999). Trees of Britain and Europe. Collins ISBN 0-00-220013-9.



Oak

Oaks have spirally arranged leaves, with a lobed margin in many species; some have serrated leaves or entire leaves with a smooth margin. The flowers are catkins, produced in spring. The fruit is a nut called an acorn, borne in a cup-like structure known as a cupule; each acorn contains one seed (rarely two or three) and takes 6-18 months to mature, depending on species. The live oaks are distinguished for being evergreen, but are not actually a distinct group and instead are dispersed across the genus. Evergreen trees growing 10-40 m tall. Oak wood has a density of about 0.75 g/cm³, great strength and hardness, and is very resistant to insect and fungal attack because of its high tannin content. It also has very attractive grain markings, particularly when quartersawn.



Limestone

Limestone often contains variable amounts of silica in the form of chert (chalcedony, flint, jasper, etc.) or siliceous skeletal fragments (sponge spicules, diatoms, radiolarians), and varying amounts of clay, silt and sand (terrestrial detritus) carried in by rivers. The primary source of the calcite in limestone is most commonly marine organisms. These organisms secrete shells made of aragonite or calcite, and leave these shells behind after the organisms die. Some of these organisms can construct mounds of rock known as reefs, building upon past generations. Below about 3,000 meters, water pressure and temperature conditions cause the dissolution of calcite to increase nonlinearly, so limestone typically does not form in deeper waters (see lysocline). Secondary calcite may also be deposited by supersaturated meteoric waters (groundwater that precipitates the material in caves). This produces speleothems, such as stalagmites and stalactites. Another form taken by calcite is oolitic limestone, which can be recognized by its granular (oolite) appearance.



Corten steel

Corten steel (often referred to as Cor-Ten) is a weather-resistant steel which could more accurately be termed as an "Atmospheric Corrosion Resistant Steel". It is a copper-chromium alloy steel - this alloy displays a greater level of resistance to atmospheric weathering when compared to other unalloyed steels. Its chemical composition promotes the early formation of an adhering protective layer of rust when exposed to the elements. Aesthetically pleasing to the eye, this finish has become popular with many high-profile architects and has been specified and used in a variety of applications including building fascias, architectural sculptures and bridges. [3]

[3] <http://www.masteel.co.uk/corten-weather-resistant-steel.htm> 28/03/2011 17:00



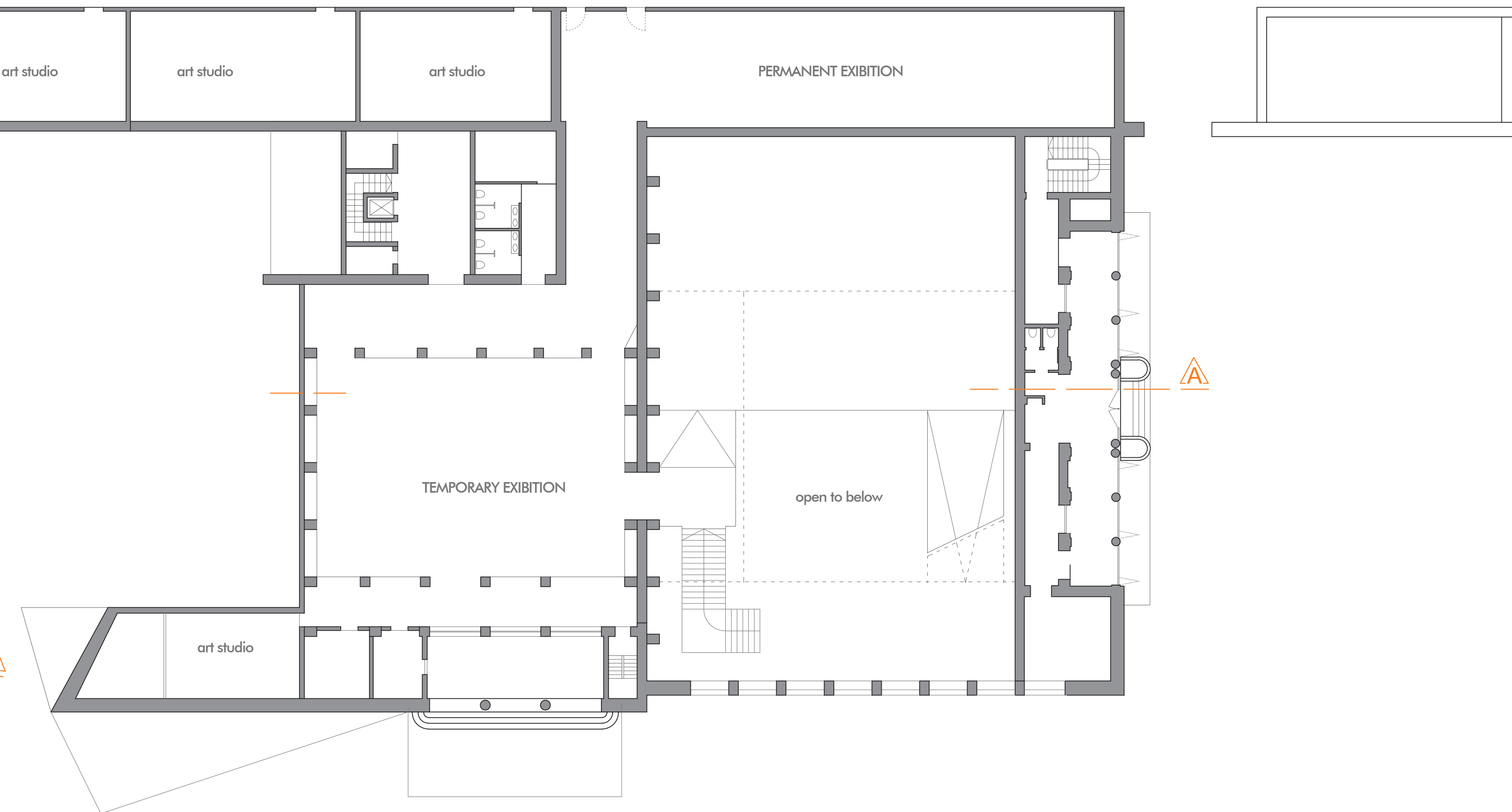
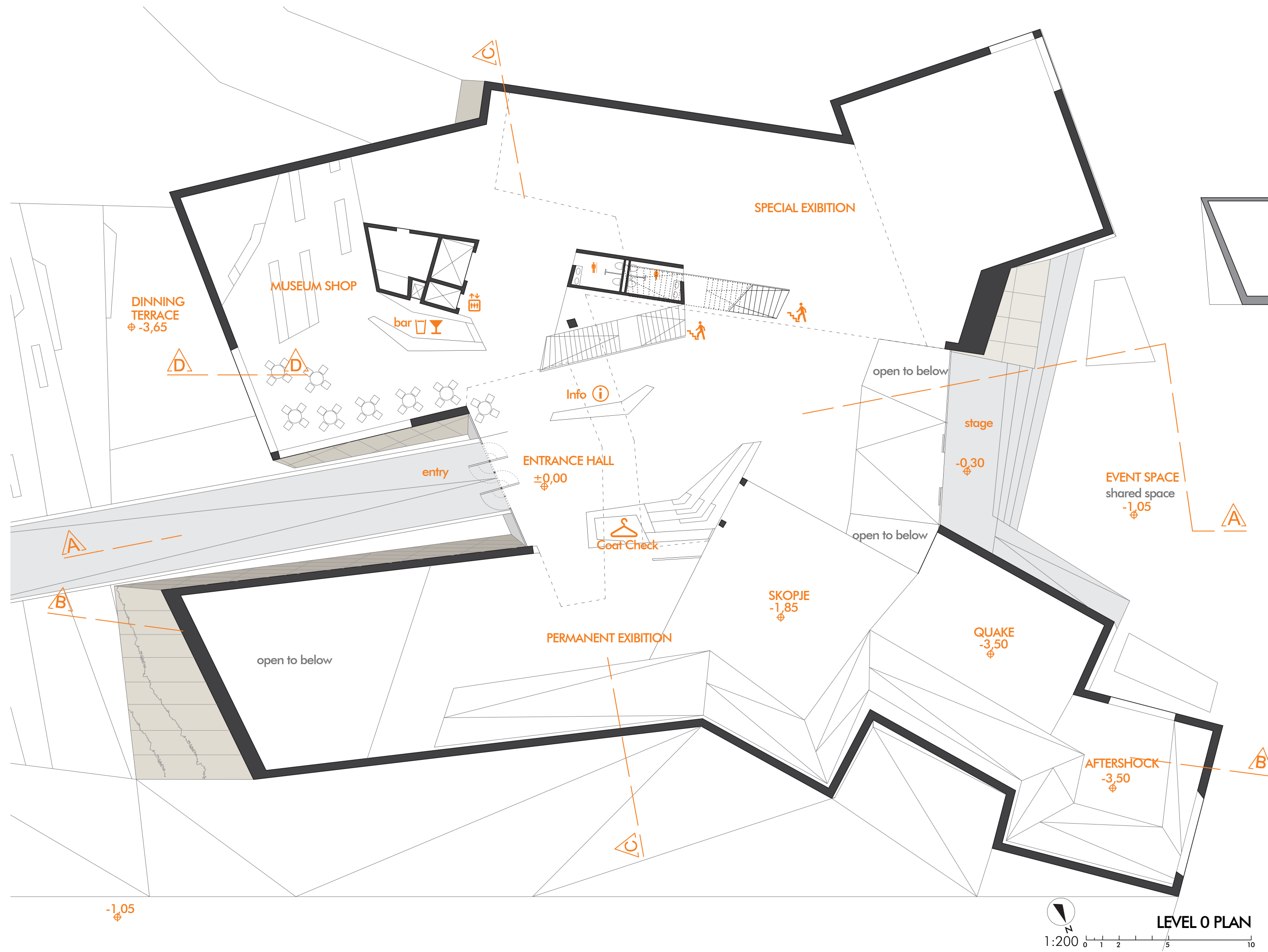
Epoxy resin floor

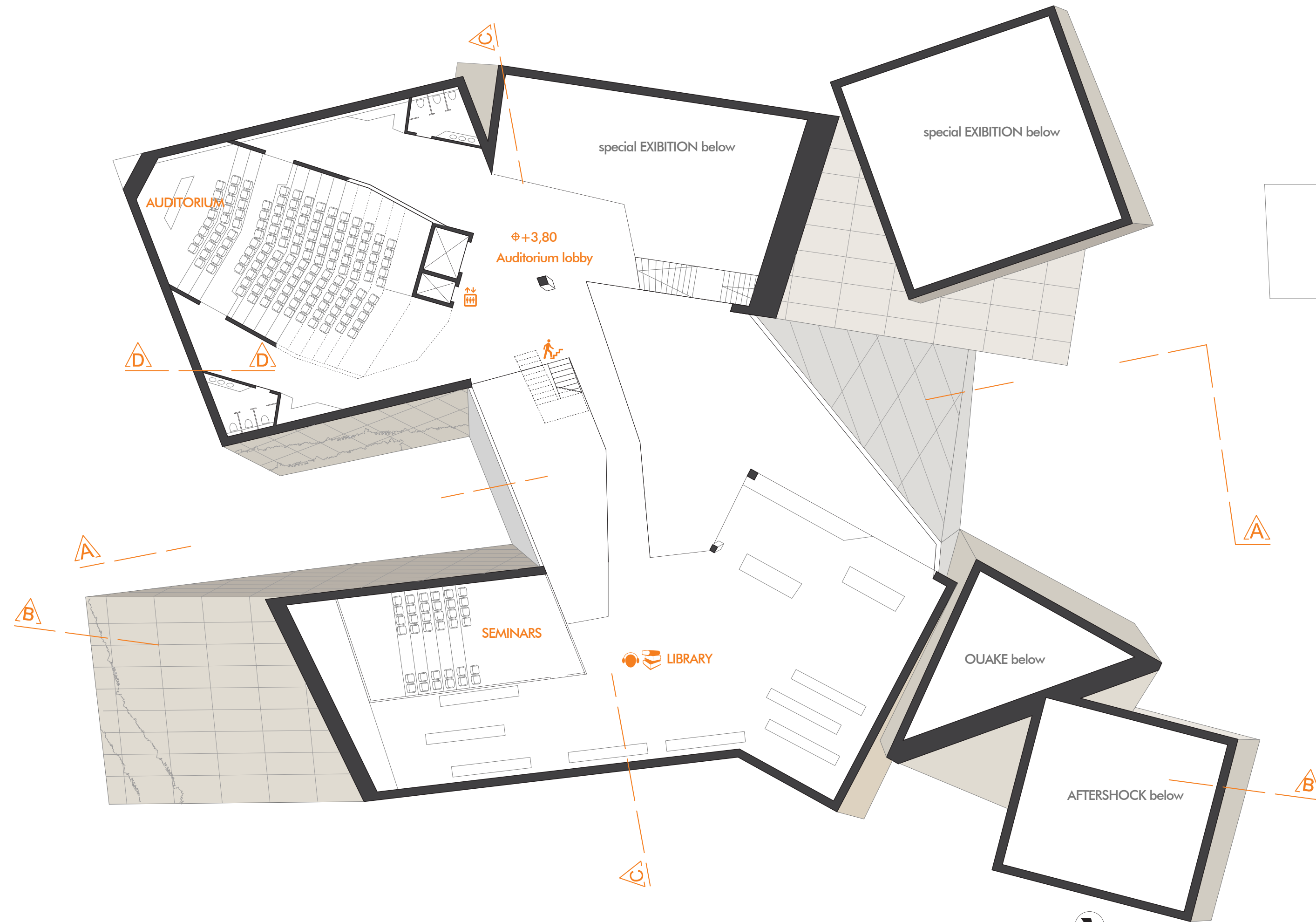
Flooring compositions based on epoxy resins have developed steadily, giving a hard, chemical-resistant, seamless, and firmly adherent floor covering. The resin and curing agent must be blended immediately before use; colours and fillers can be added.







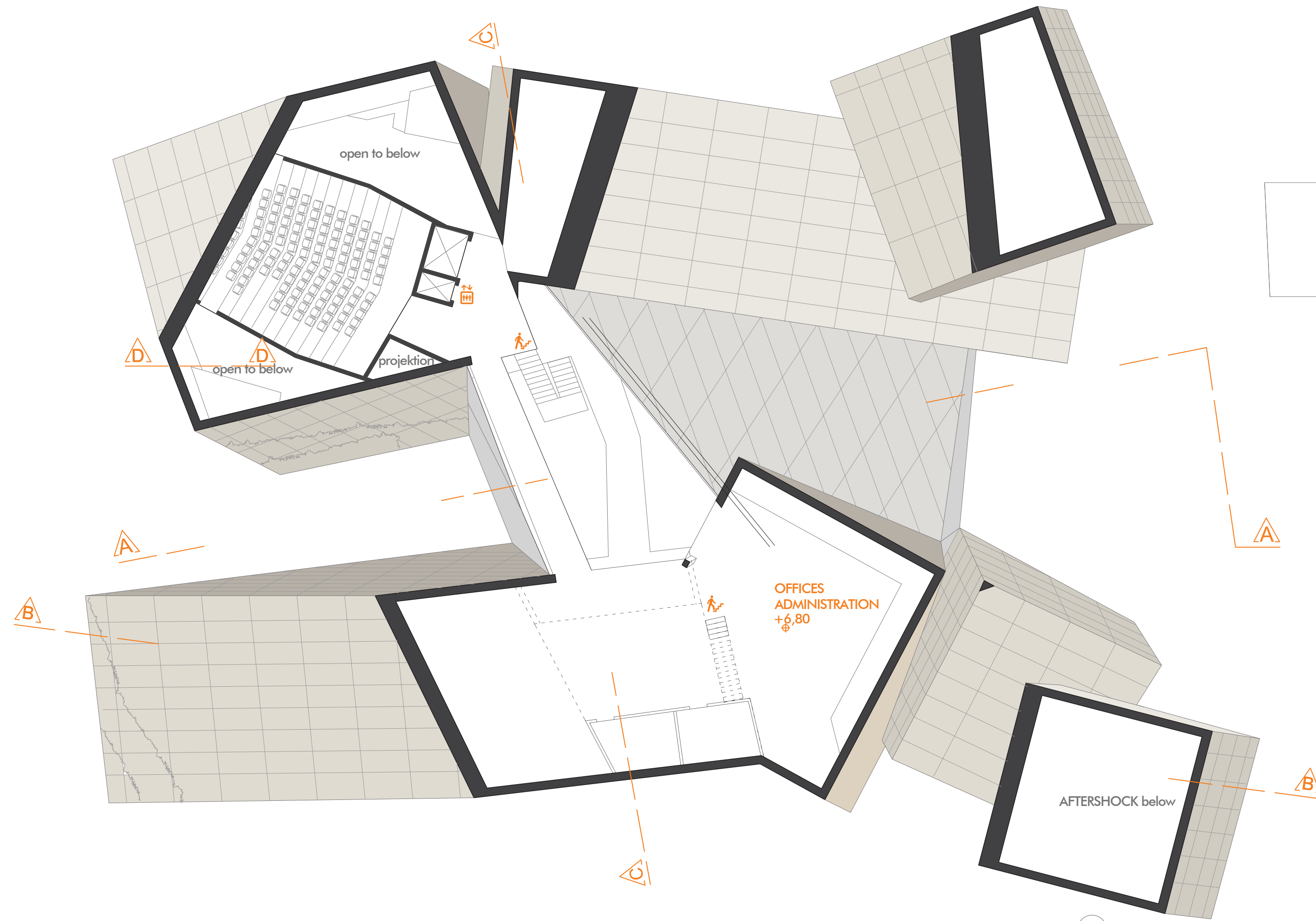




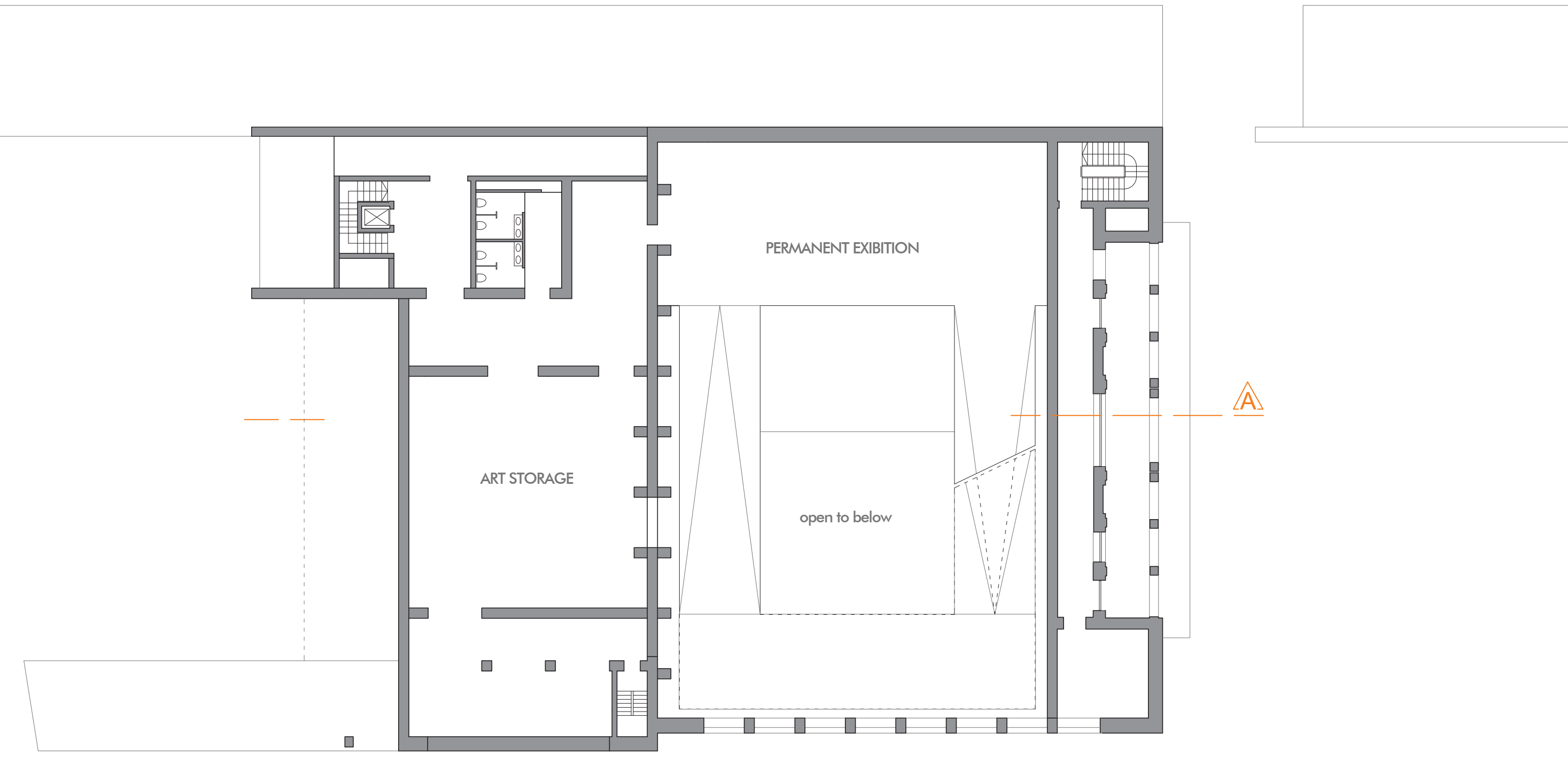
LEVEL 1 PLAN

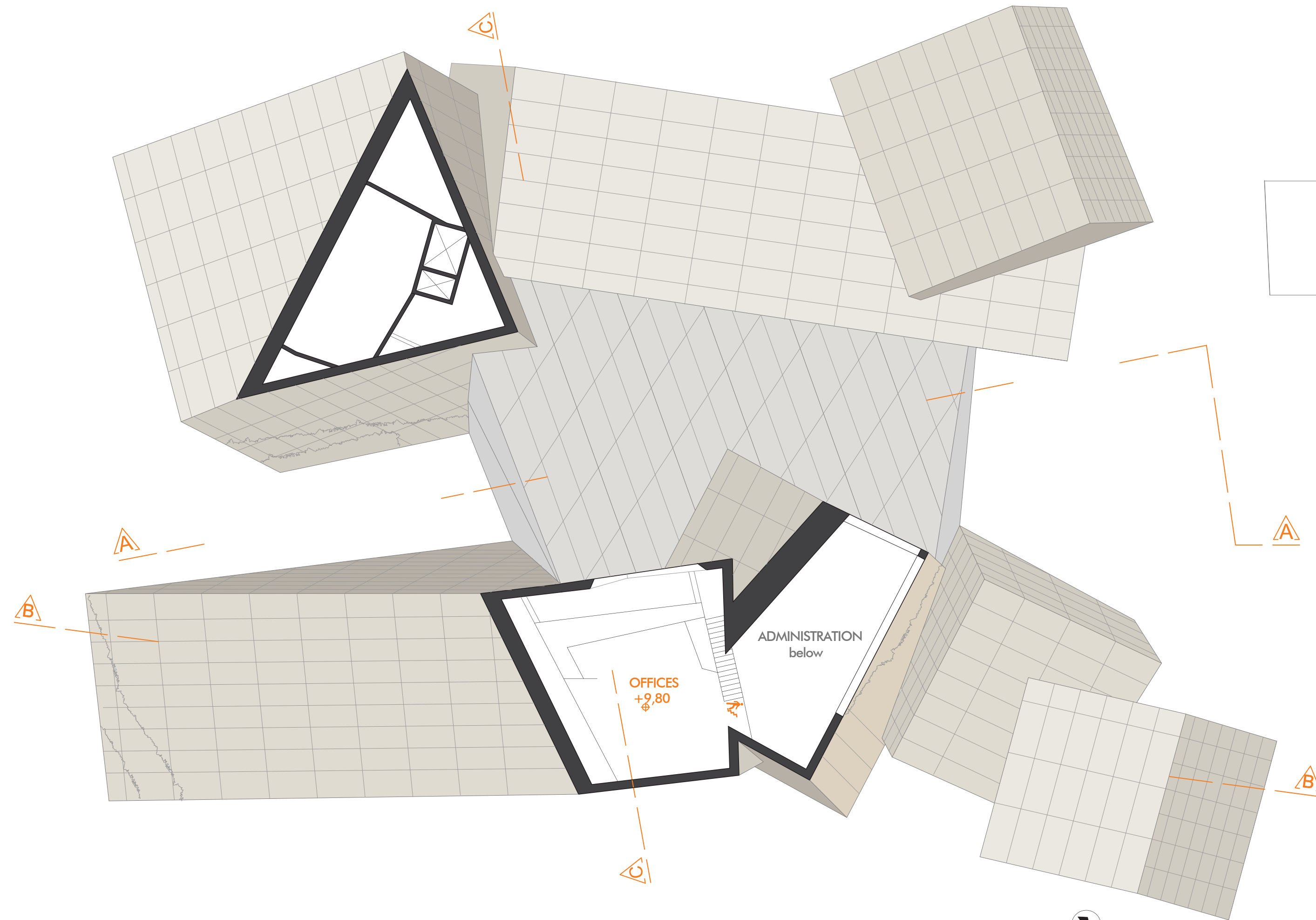
1:200 0 1 2 5 10





LEVEL 2 PLAN
1:200 0 1 2 5 10

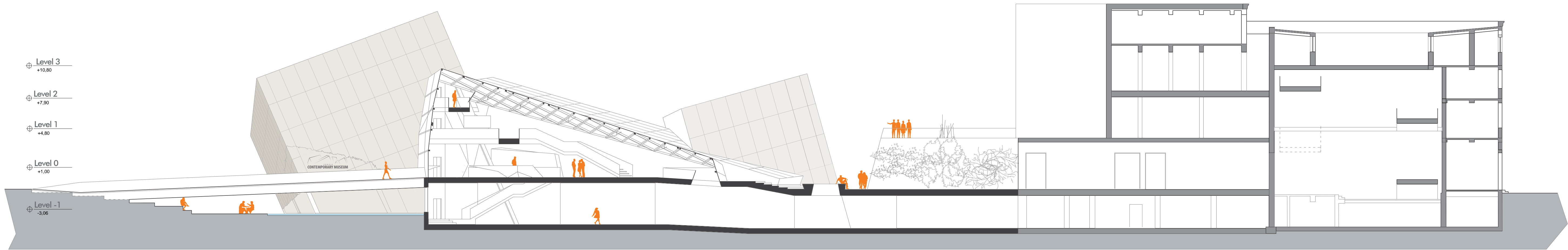




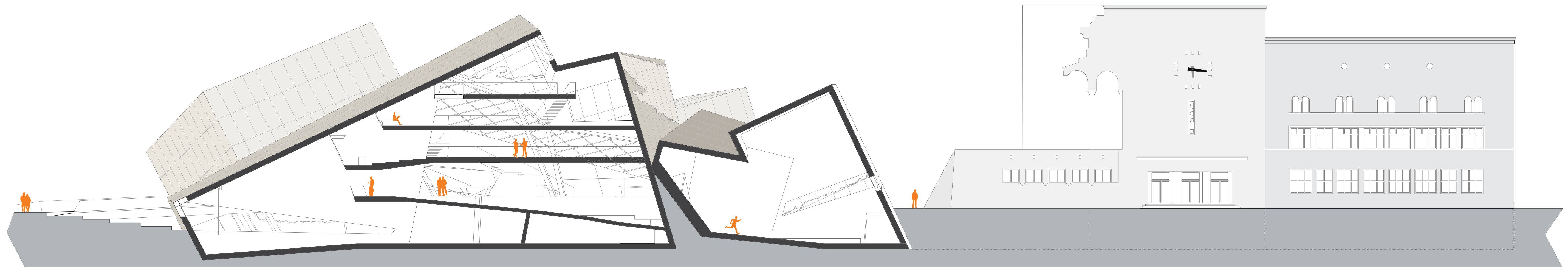
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LEVEL 3 PLAN



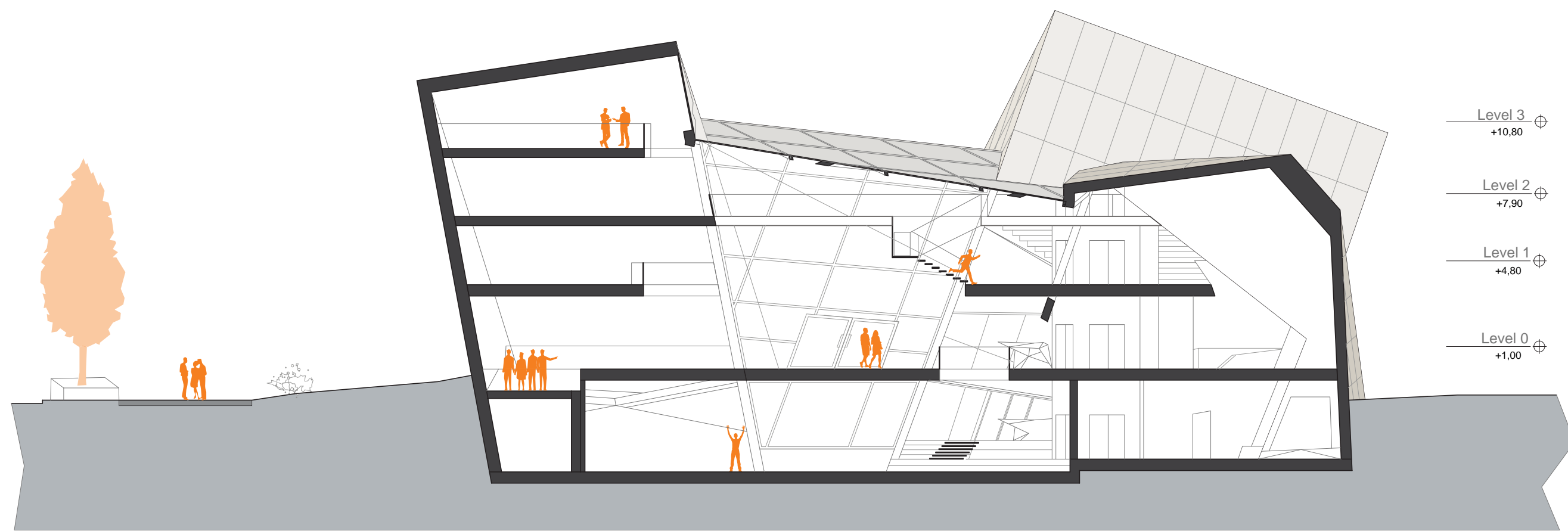


SECTION A_A



SECTION B_B

0 1 2 5 10



Level 3 ⊕
+10.80

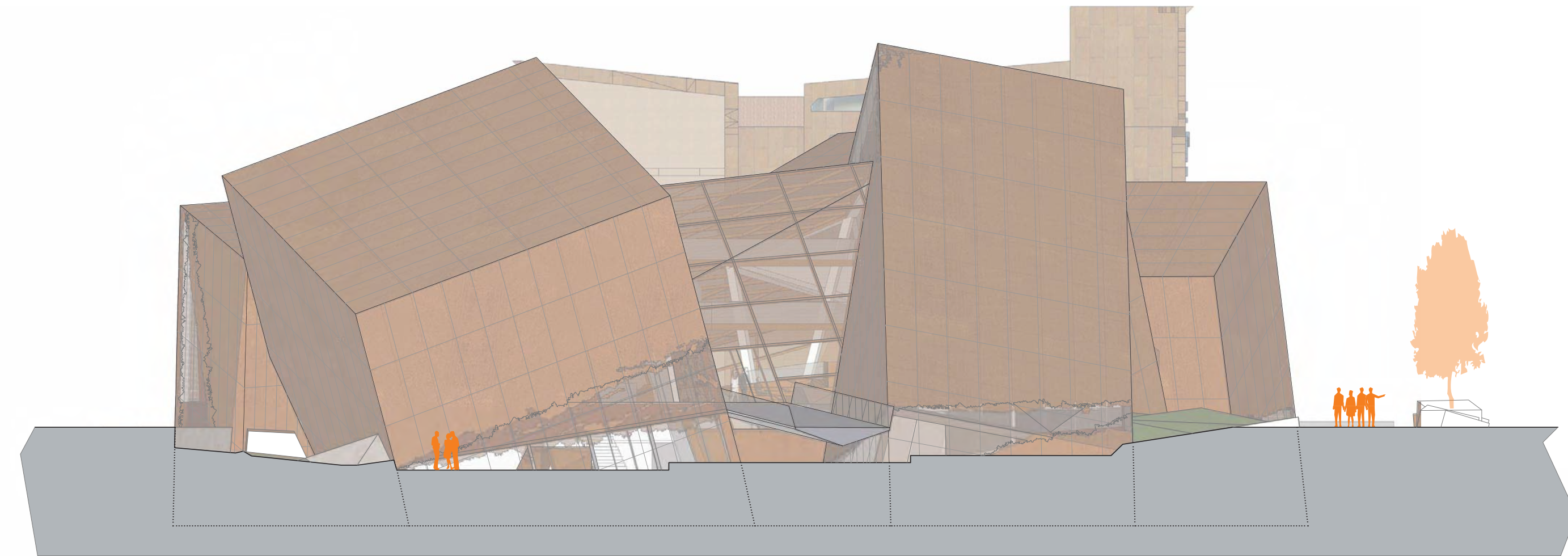
Level 2 ⊕
+7.90

Level 1 ⊕
+4.80

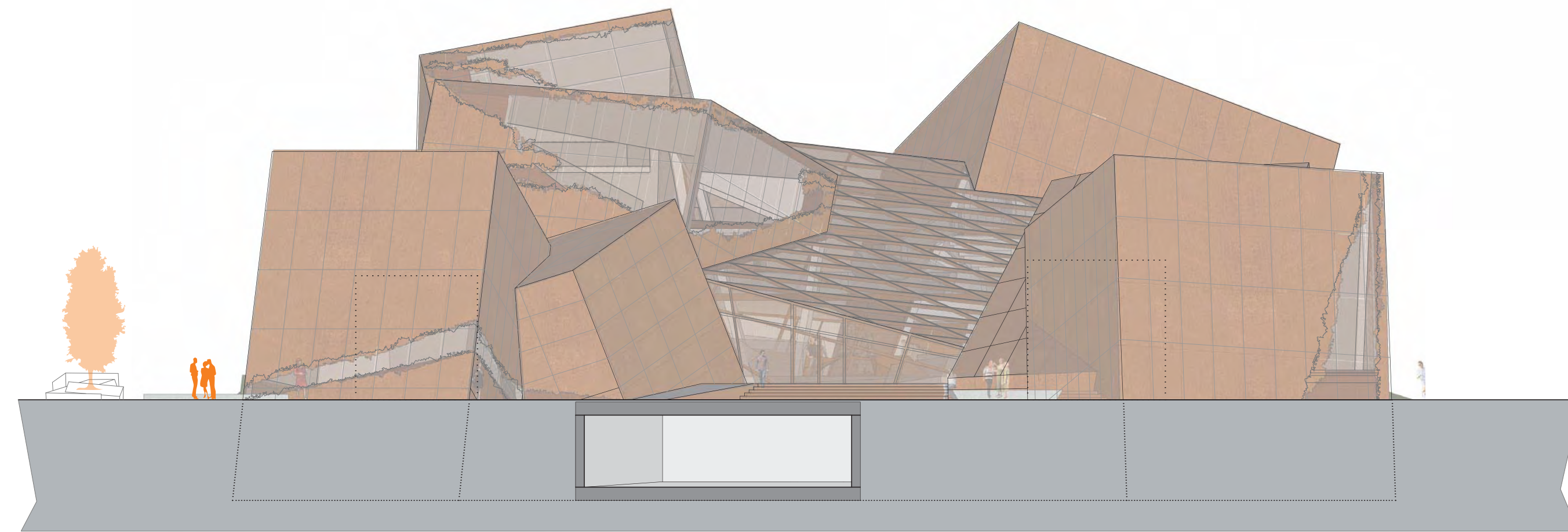
Level 0 ⊕
+1.00

SECTION C_C

0 1 2 5 10

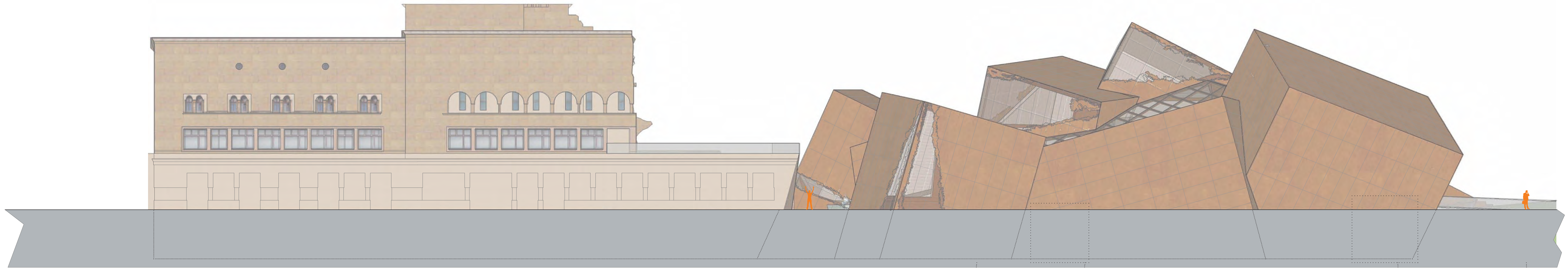


EAST ELEVATION

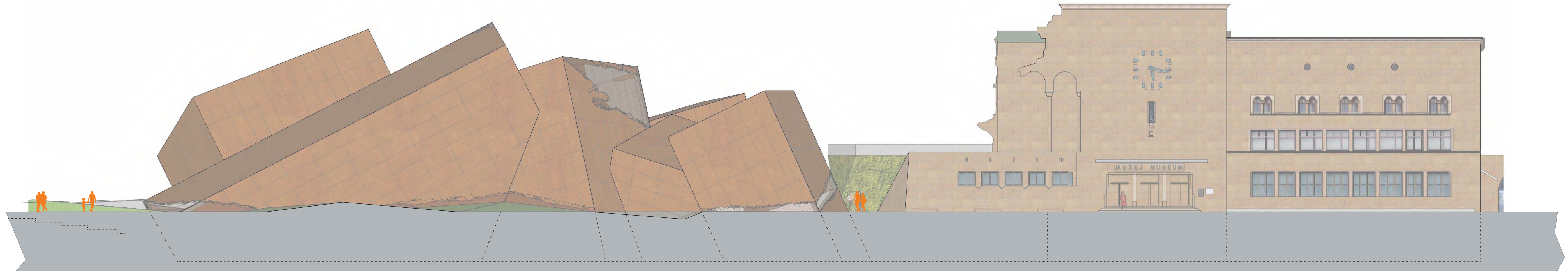


WEST ELEVATION

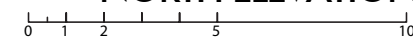
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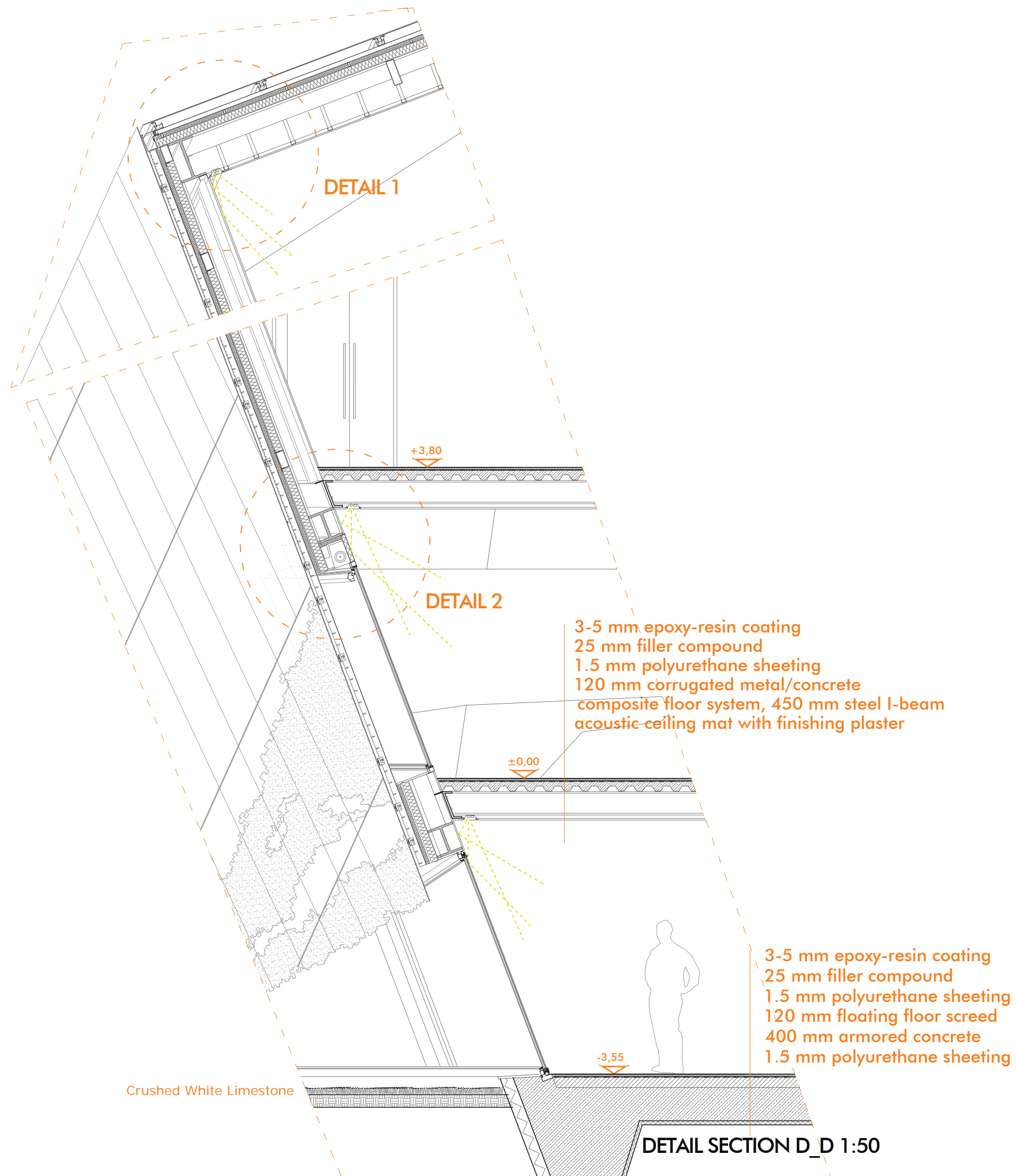


SOUTH ELEVATION



NORTH ELEVATION





PANEL COR-TEN 1:10
laser cutted pattern

5 mm COR-TEN
pre-oxidized steel sheet

Stainless steel sheet BEMO,
matte black enamel

2mm stainless steel U shape
with 08x15 mounting holes

Technobond expansion foam
adhesive on one side

5mm stainless steel sheeting

5mm rainwater gutter sheet metal

2mm stainless steel U shape
with 08x15 mounting holes

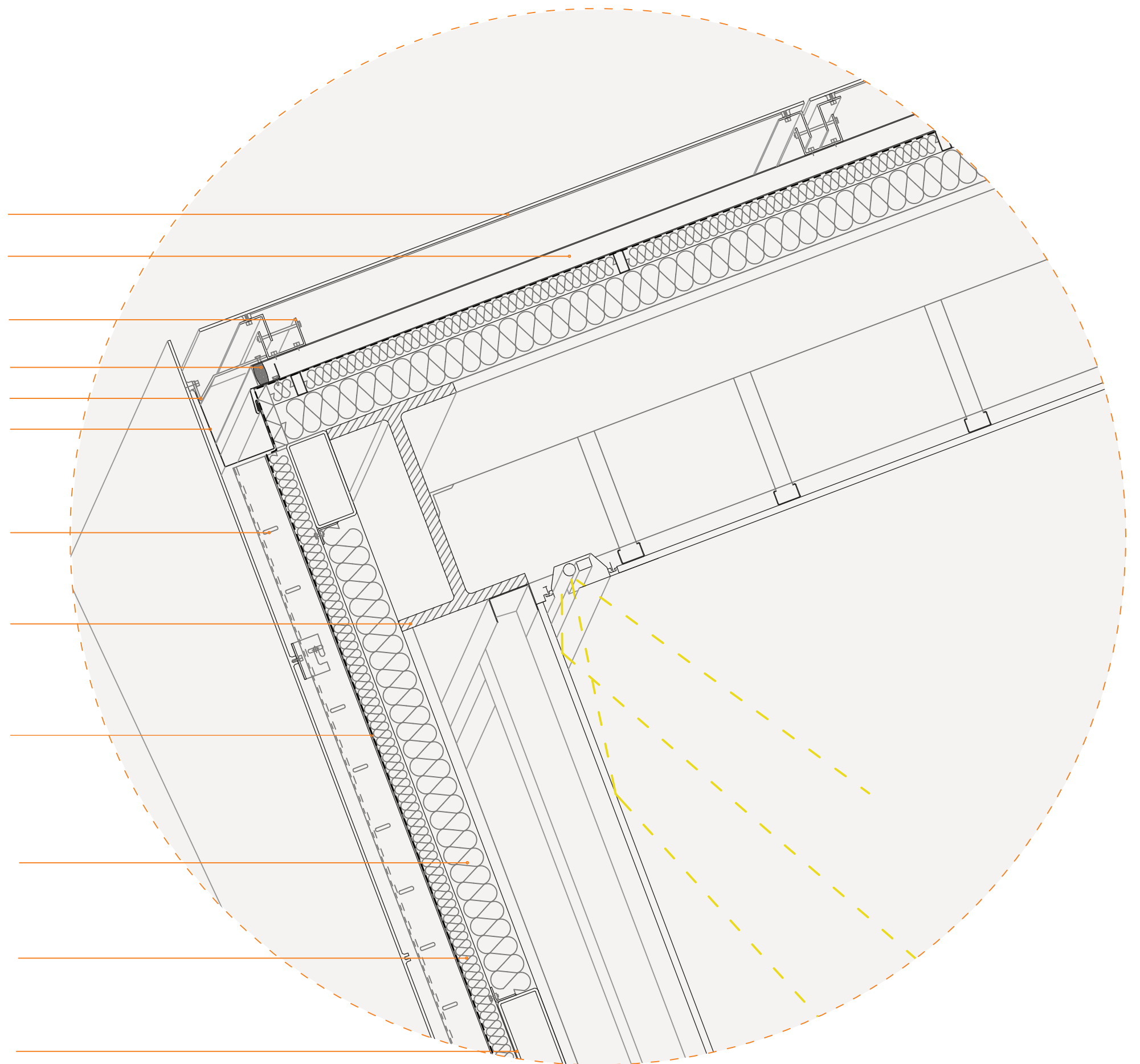
structure:400-600mm steel I-beam

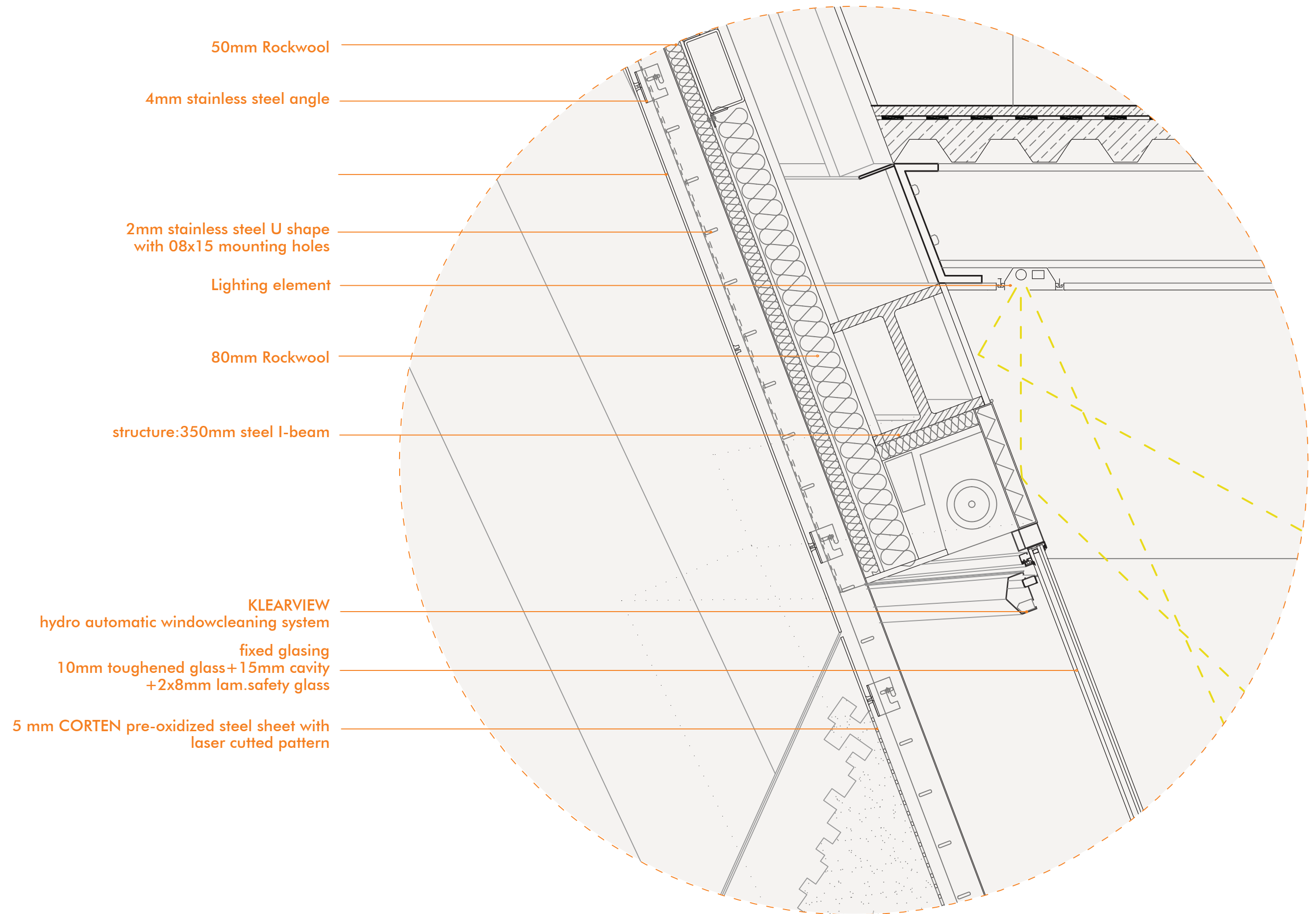
sealing membrane

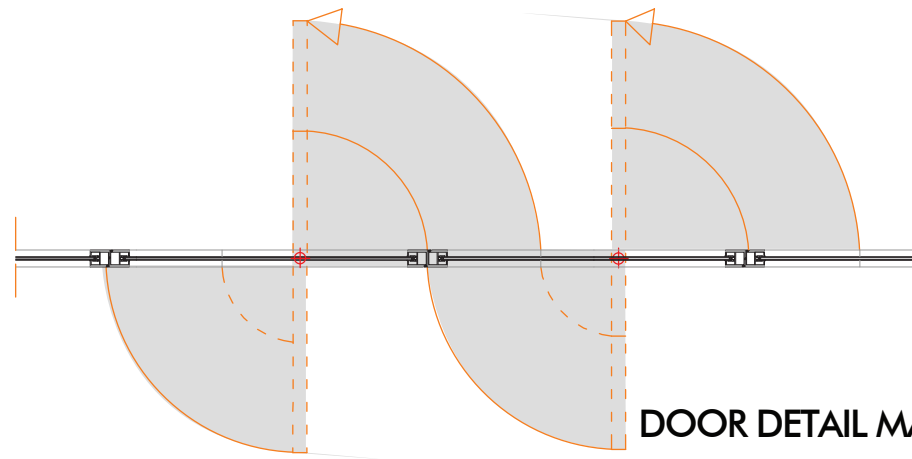
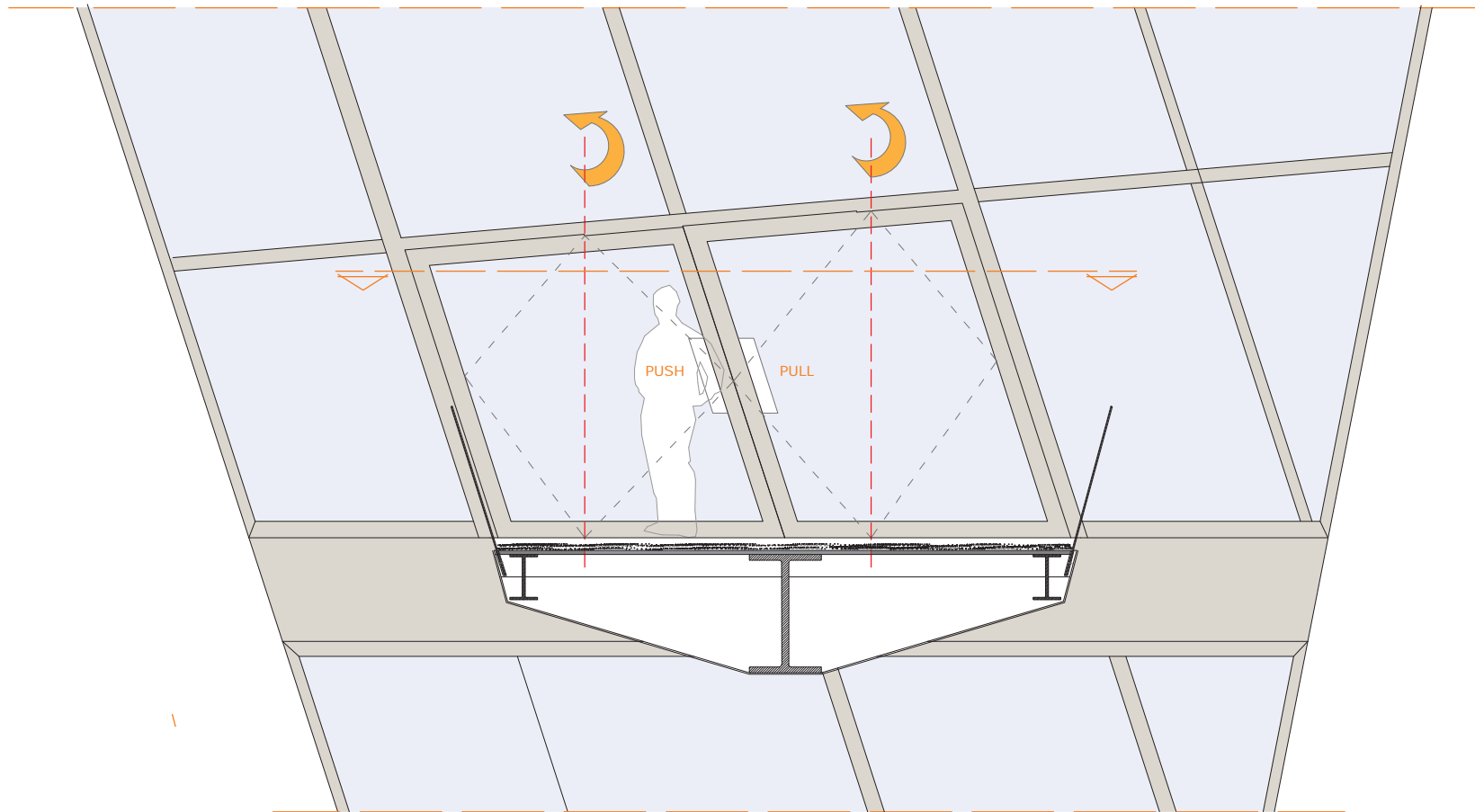
80mm Rockwool

50mm Rockwool

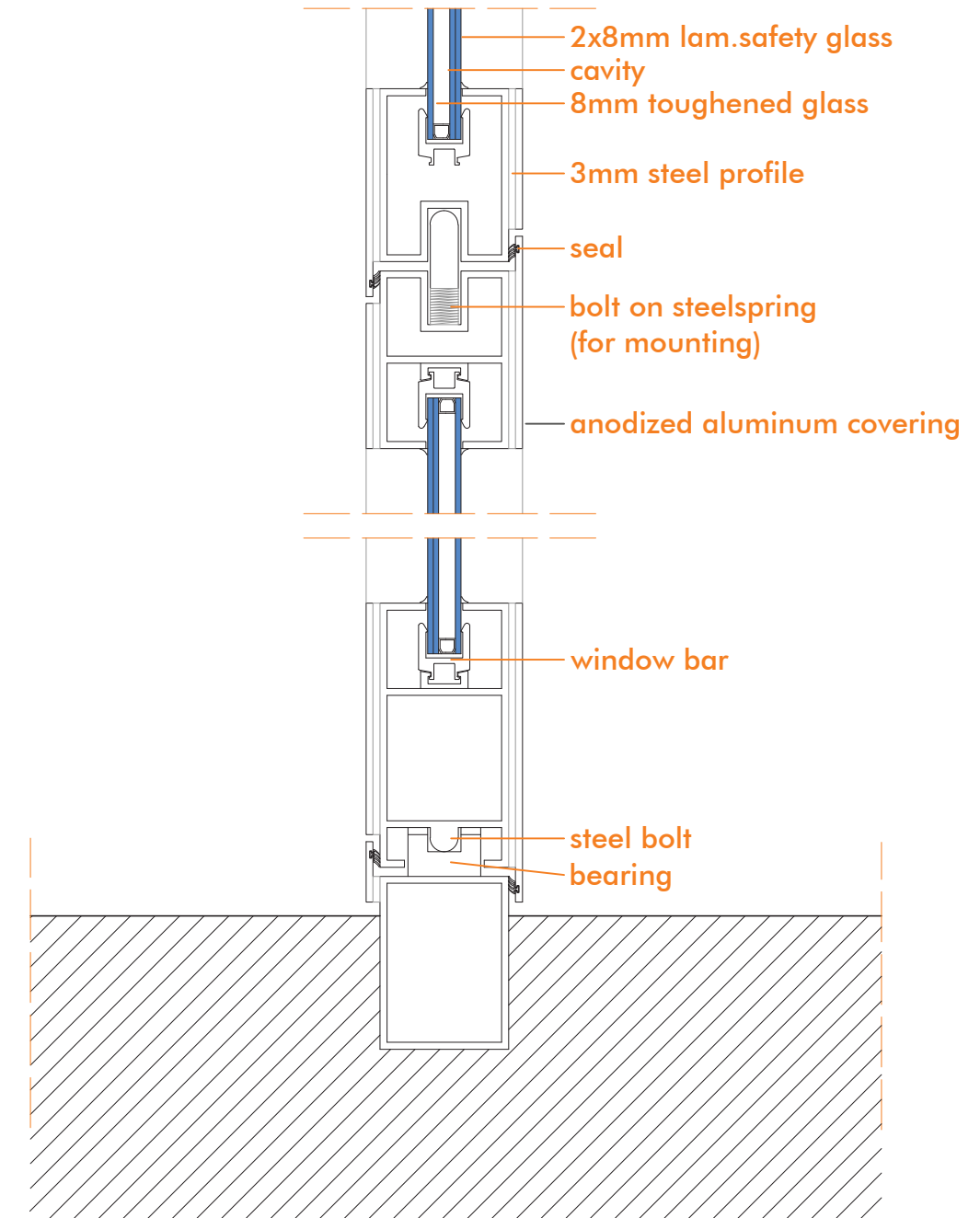
200/100/6 mm steel RHS



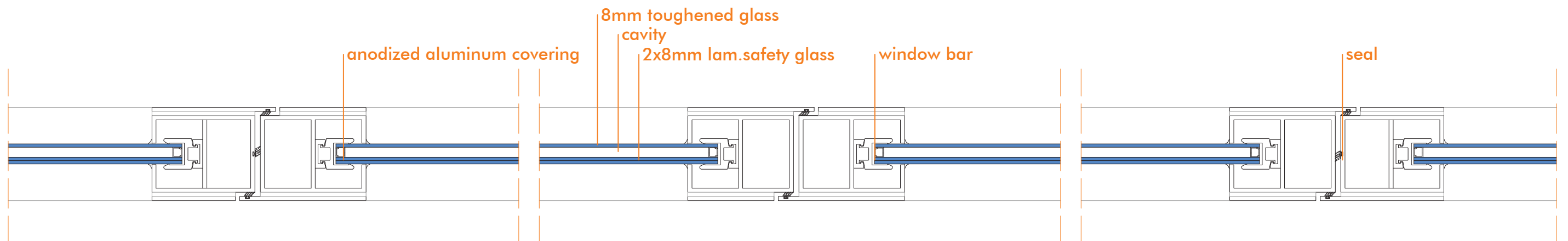




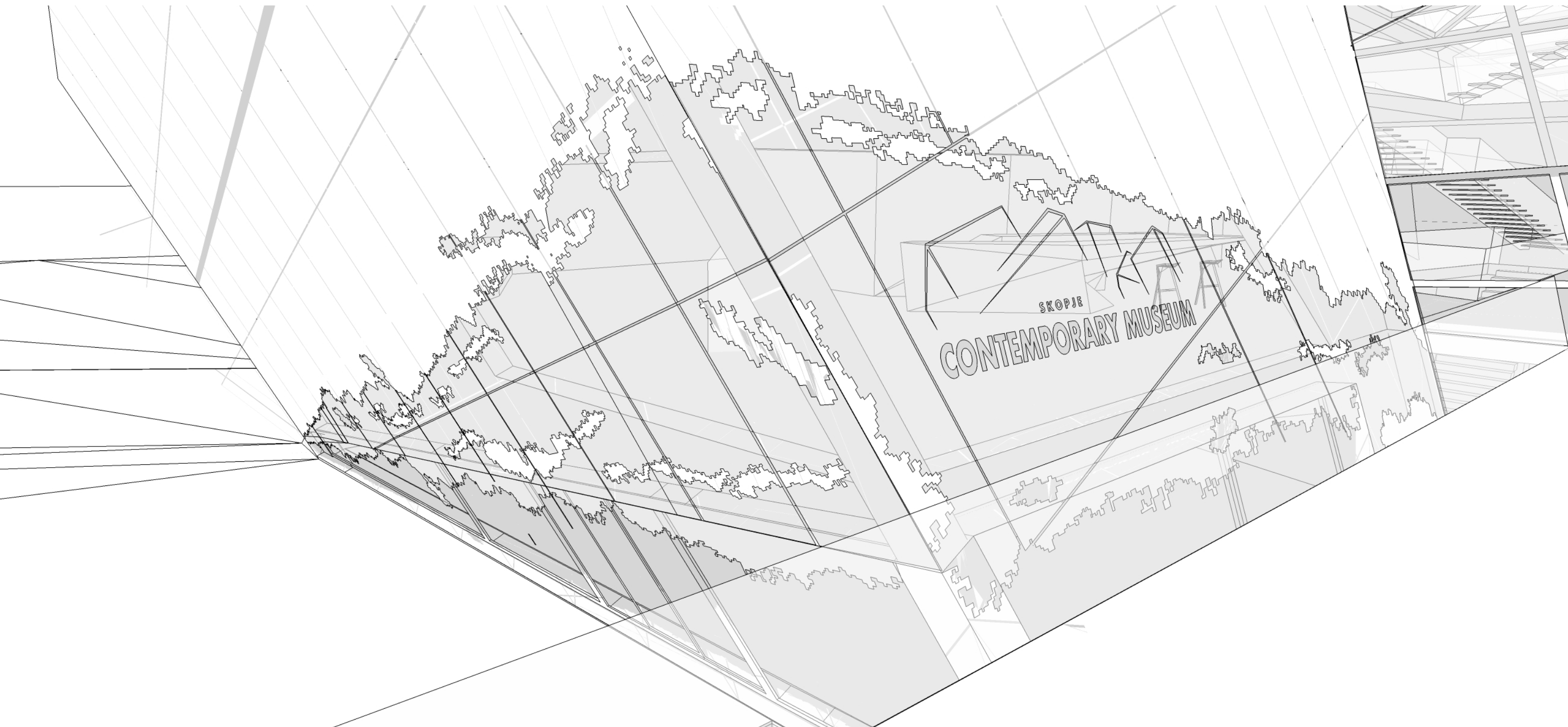
DOOR DETAIL MAIN ENTRANCE 1:50

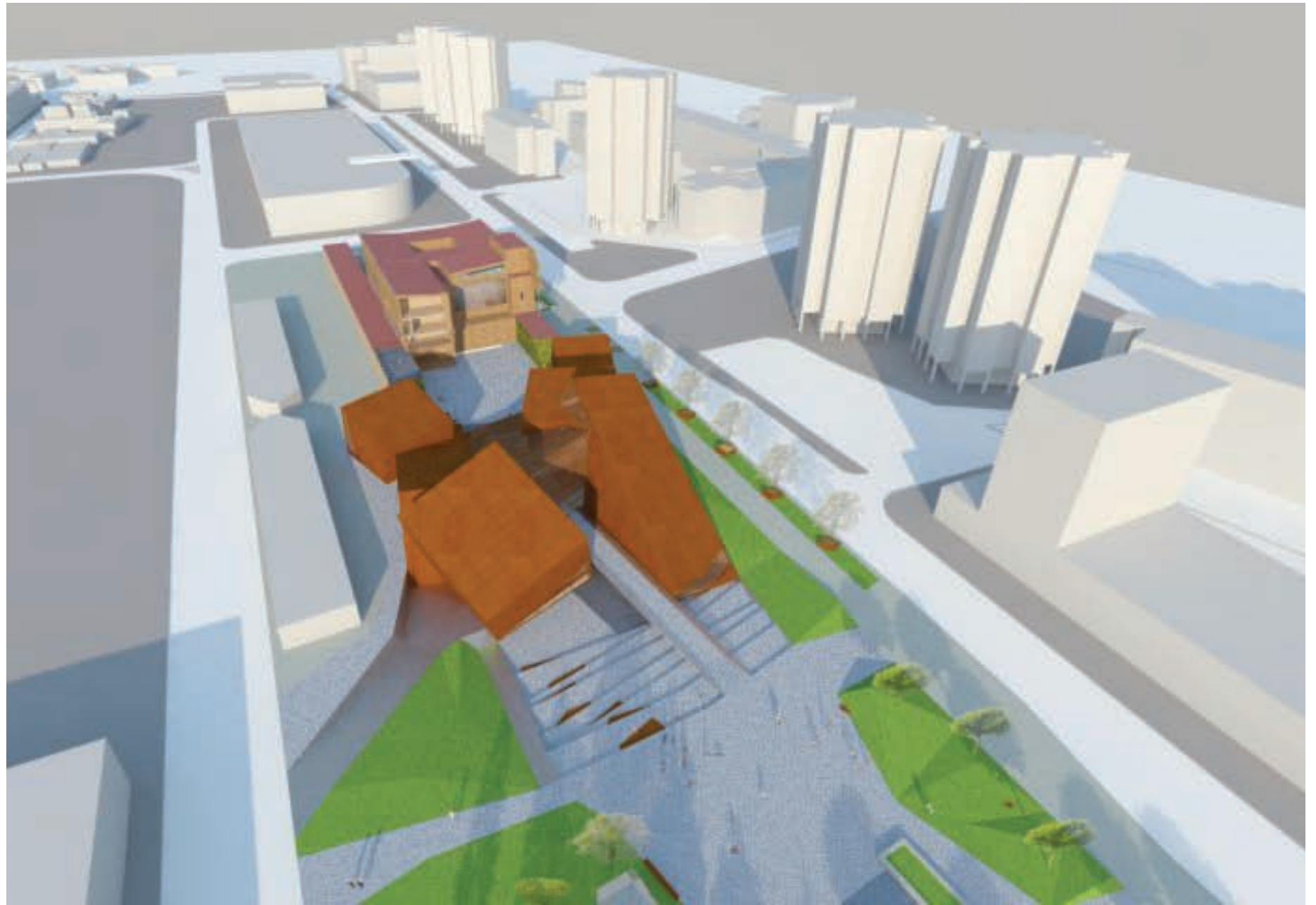


VERTICAL SECTION 1:5



HORIZONTAL SECTION 1:5







BAR_SHOP VIEW



RESTAURANT VIEW

