

Typology: Educational Building
Location: Thessaloniki, Greece
GSM: 2.500 m2
Services Provided:

Architectural Design
(New Building & Full Renovation
of Existing Structure)

Status: Completed
Year: 2020-2024



KASSANDRA CENTER FOR EDUCATIONAL EXCELLENCE / IBDP







The architectural proposal envisions a flexible and innovative school building that encourages creativity, participation, and interaction. At the same time, it honors the long history and tradition of the educational institution and highlights the historic Compton Hall, as it integrates harmoniously into the exceptional natural environment of the Anatolia College Campus. Two building entities coexist with rhythmic autonomy, without one dominating or being diminished by the other.

The new building houses 19 classrooms, five laboratories, three soundproof rooms, two visual arts studios, office spaces for administration and educators, and the 'Kassandra Auditorium'.

The new educational building is designed to achieve optimal performance in terms of sustainability and to optimize indoor environmental conditions, such as thermal comfort and air quality, while consuming the least amount of energy possible.

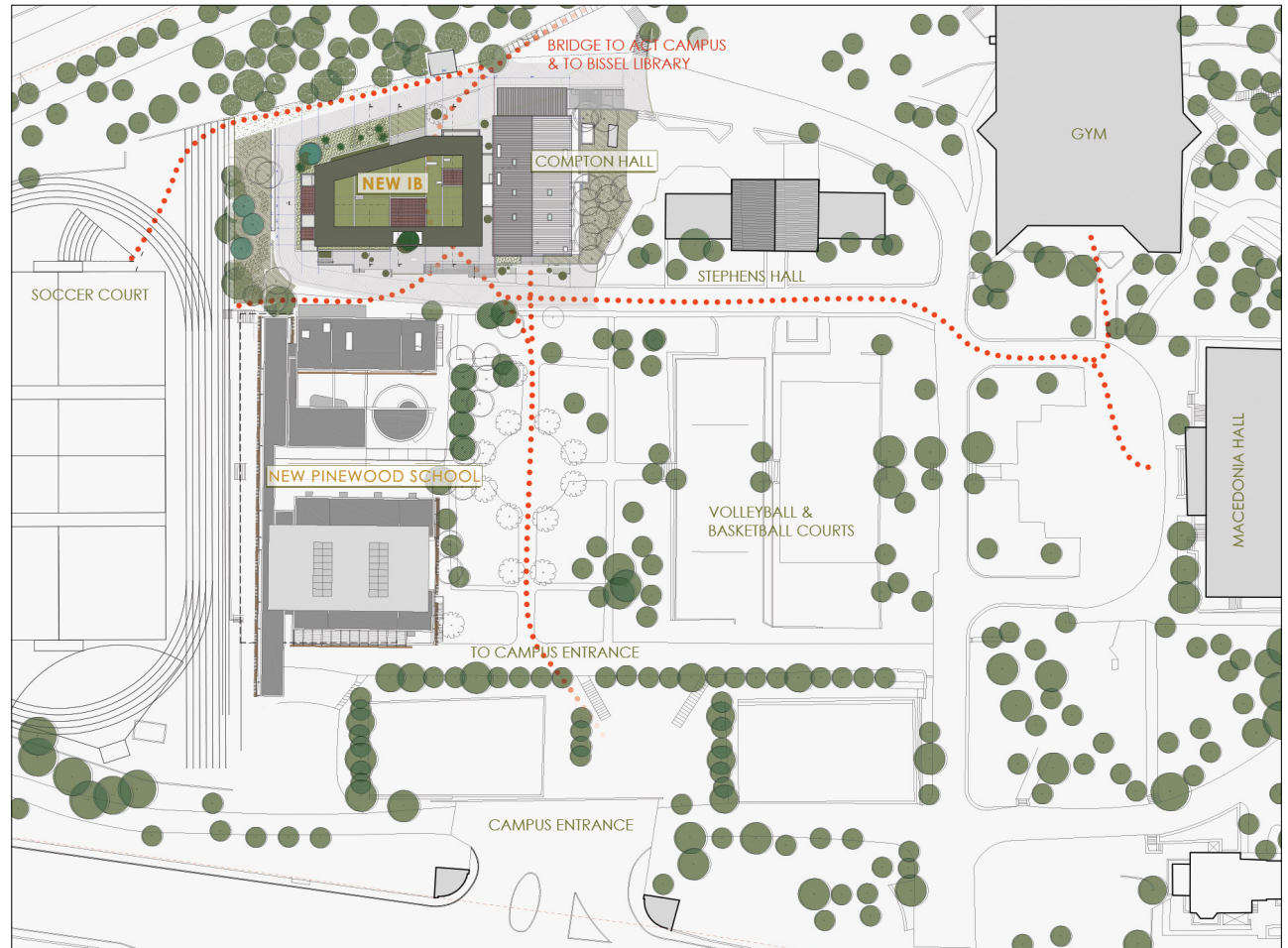


Compton Hall



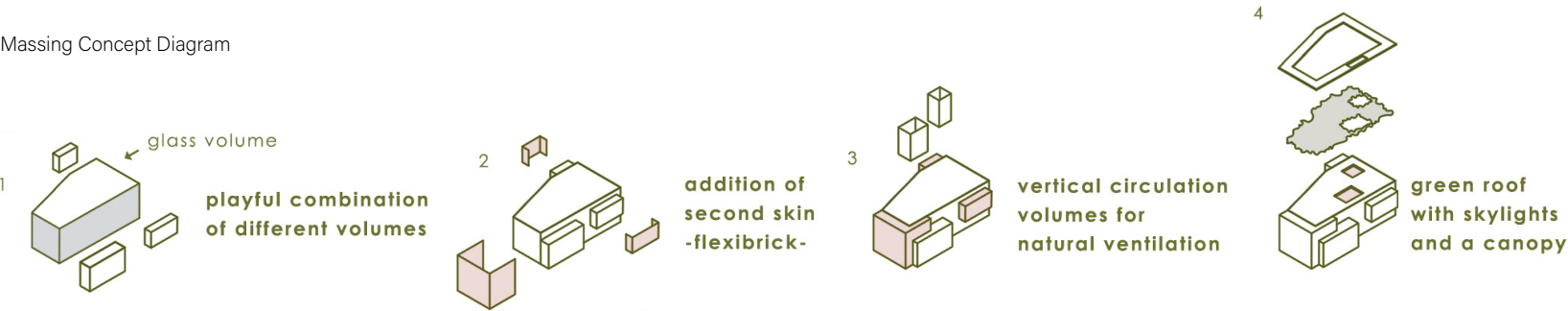
Compton Hall is a 1,520 m² historic stone building dating back to the 1930s. With its timeless architectural character, it stands as a lasting symbol of the campus, embodying tradition and heritage.

Following a partial refurbishment in 2018, the building has now undergone a full renovation and upgrade, carried out in parallel with the construction of the new extension.

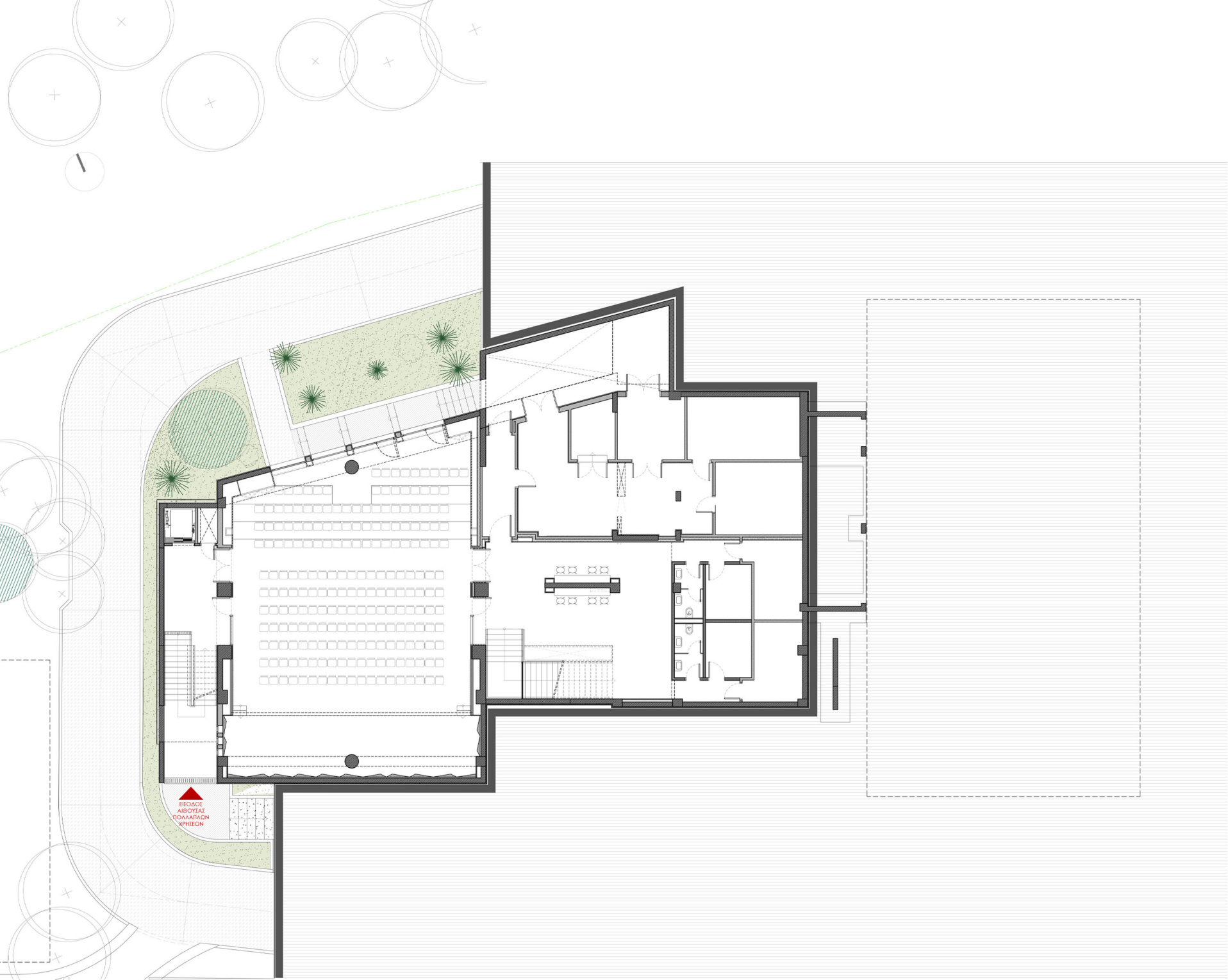


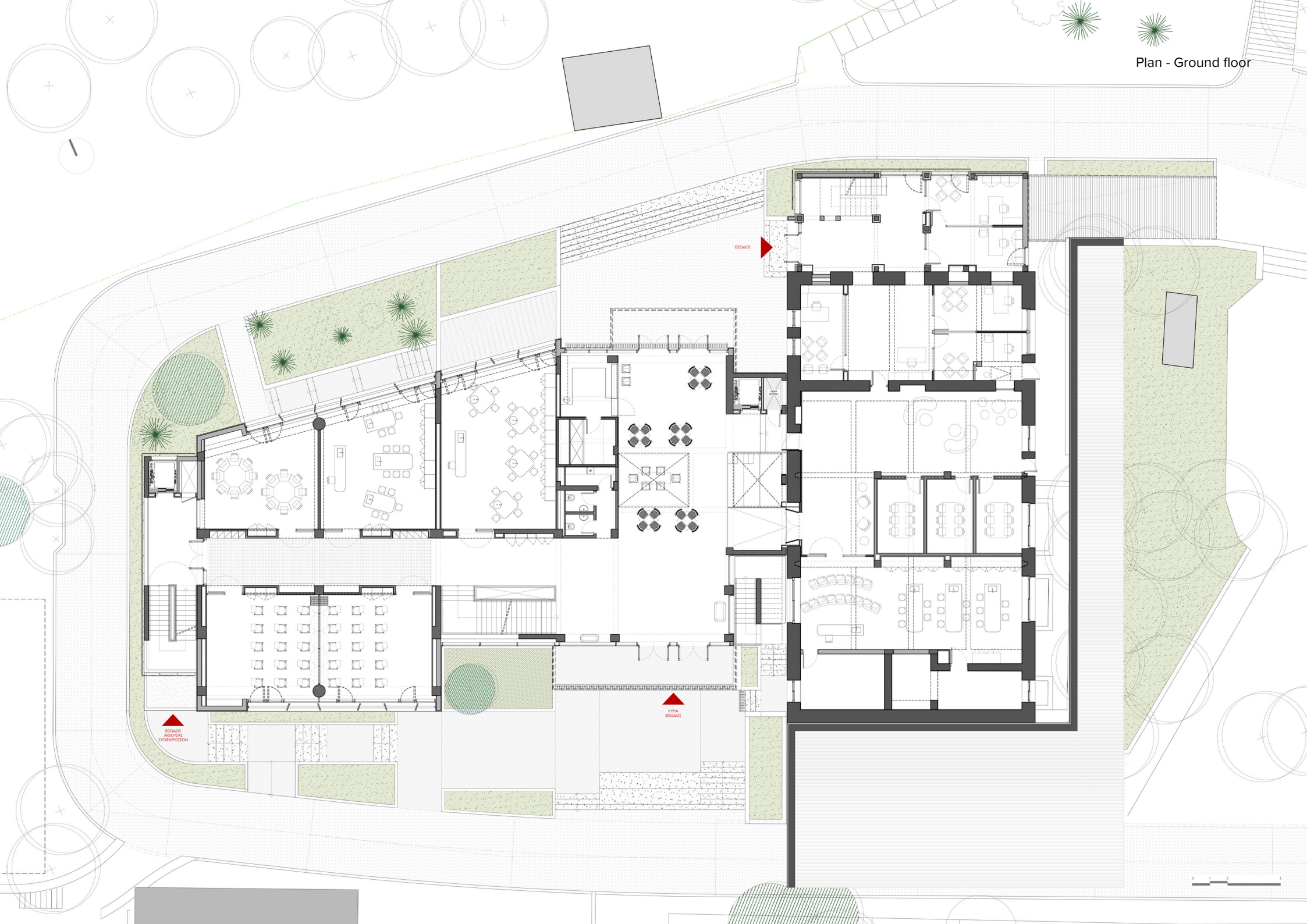
Campus Masterplan

Massing Concept Diagram



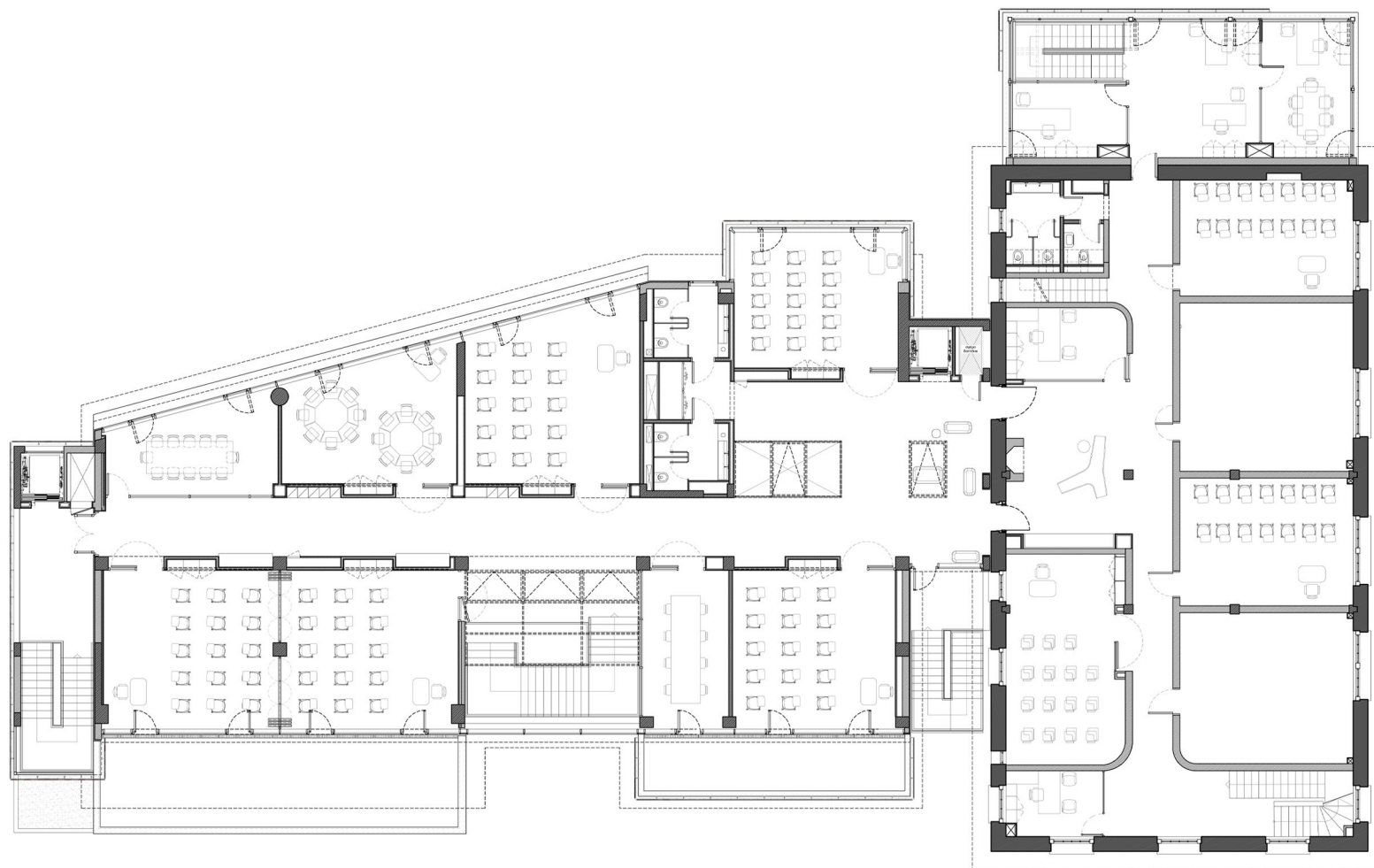
In-between

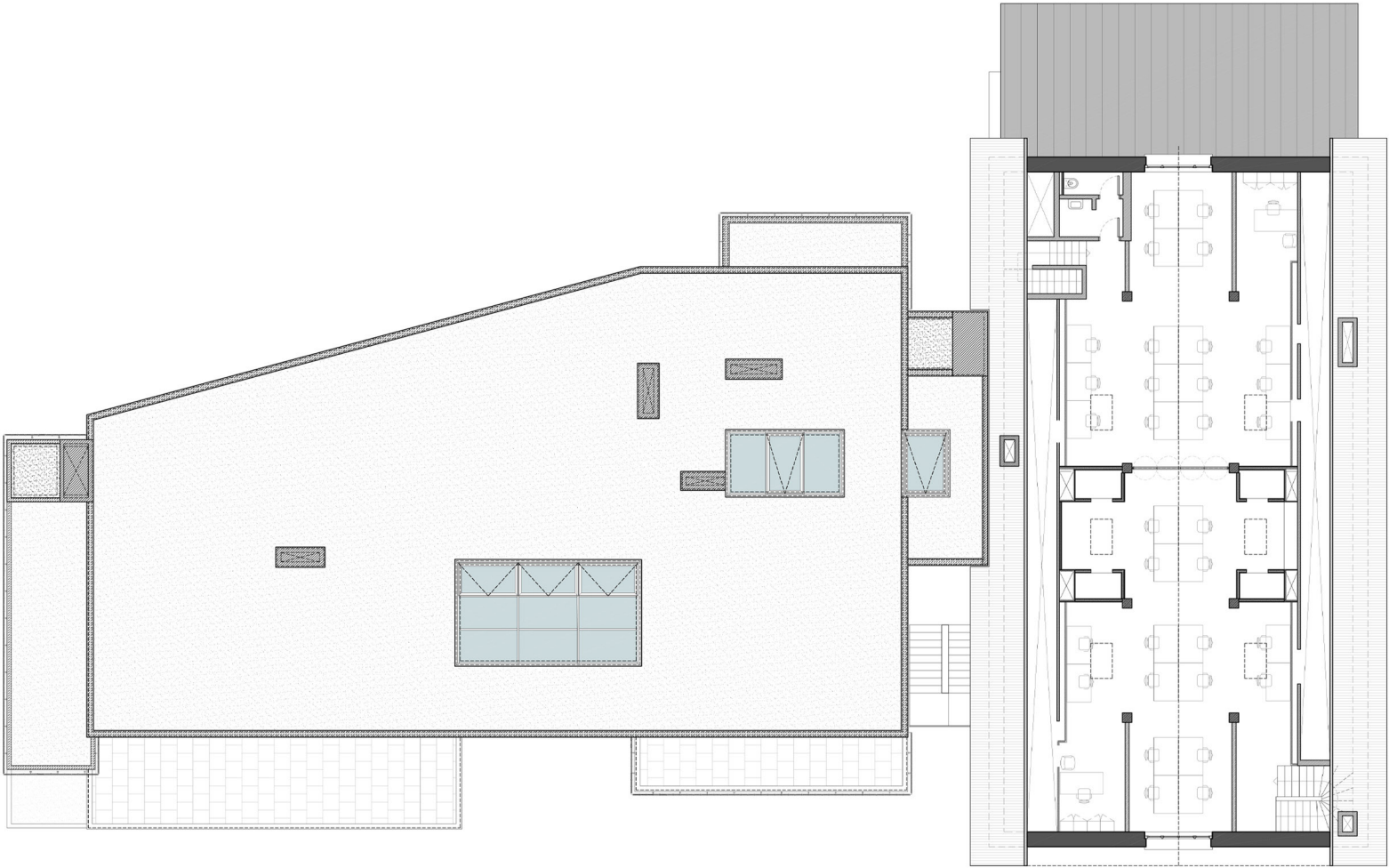




Plan - First floor







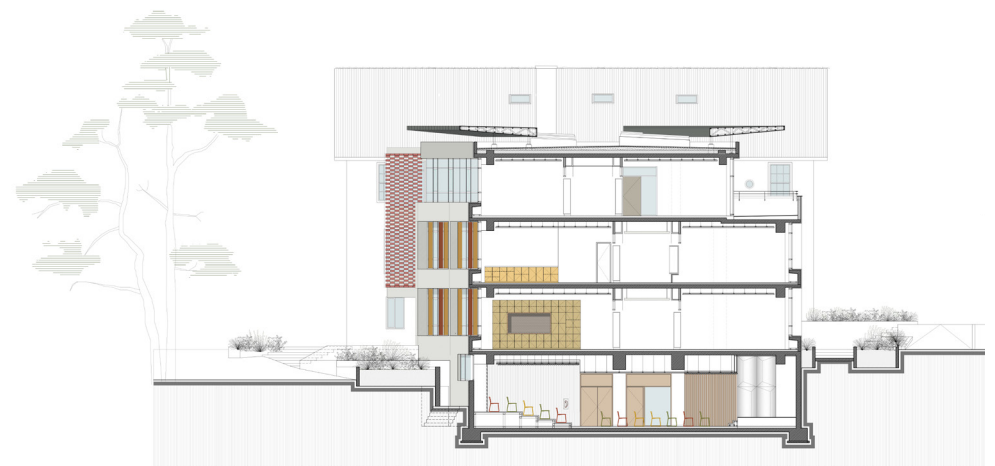
The rotating metal louvers



The selection of materials that make up the building's external envelope is a key factor in energy conservation and the overall reduction of thermal losses. In addition to the character, they lend to the building's morphology. The appropriate shading and sun protection elements on the facades—such as the Flexbrick ceramic mesh, the rotating metal louvers, and the metal canopy—minimize the likelihood of overheating during the summer, while in winter, they allow sunlight to enter space, reducing the need for heating.



West Elevation



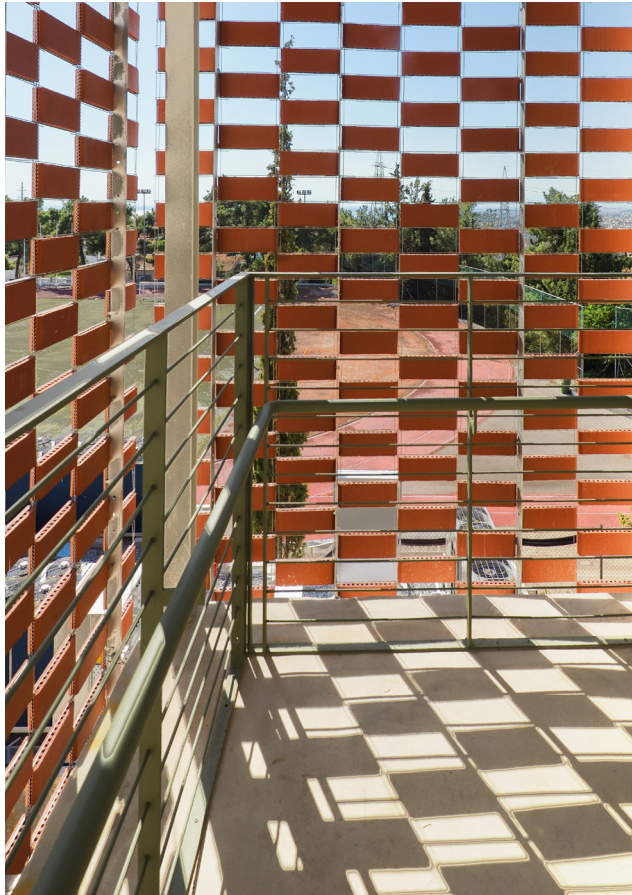
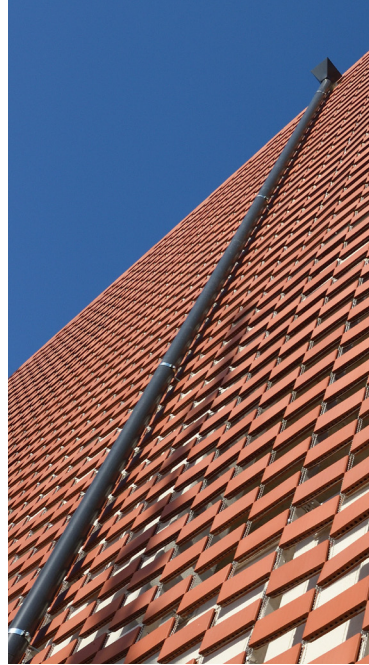
Cross Section



^ South Elevation
 < North Elevation



Specifically, the Flexbrick ceramic mesh, this industrialized sustainable dry-assembly cladding system that takes the form of ceramic fabric, serves as a reinterpretation of the ceramic tiling on the roofs of existing buildings and gives a new, cutting-edge aspect. Its advantage is that it provides an ancient material that combines traditional manual installation techniques with modern expertise. A steel mesh holds the mosaic of specially designed ceramic tiles in horizontal and vertical strips. Being extremely flexible, the mesh can be folded into pallets for storage and transportation, taking up little space, and the strips make installation easy, quick, and cost-effective, further reducing emissions. Overall, environmentally friendly materials and systems are used with the goal of optimizing the building's life cycle performance. Additionally, the placement and orientation of the classrooms along the North-South axis enhances its energy efficiency.



The Flexbrick mesh - Light and Shadows

Overall, environmentally friendly materials and systems are used with the goal of optimizing the building's life cycle performance. Additionally, the placement and orientation of the classrooms along the North-South axis enhances its energy efficiency.

The building's design also aims to maximize the use of natural resources to meet the needs for natural lighting and ventilation. The extensive glazing and openings allow daylight to enter the interior spaces, minimizing the use of artificial light, providing excellent visual performance, and ensuring continuous connection with the natural environment.

Nature also flows in, blurring and unifying the boundaries between outside and inside.



Unifying the boundaries between outside and inside



The central staircase

Additionally, the skylights in the upper zones of the classroom windows contribute to cross ventilation, improving indoor air quality and cooling the spaces. The roof skylights contribute to the necessary heat extraction and ventilation across all levels through the open staircase (chimney effect).

Since the goal was to achieve a comprehensive design that ensures every choice aligns with sustainability goals, the design of the building's mechanical and electrical installations was also guided by the criteria for ensuring a high level of comfort and safety for its users.

The use of modern, cutting-edge technology equipment with high energy efficiency, while maintaining the simplicity of the construction, ensures both the long lifespan of the equipment and its environmental friendliness. This forward-thinking approach prepares the institution for a sustainable future.





The central staircase





Longitudinal Section



Interior views



The Kassandra Auditorium



