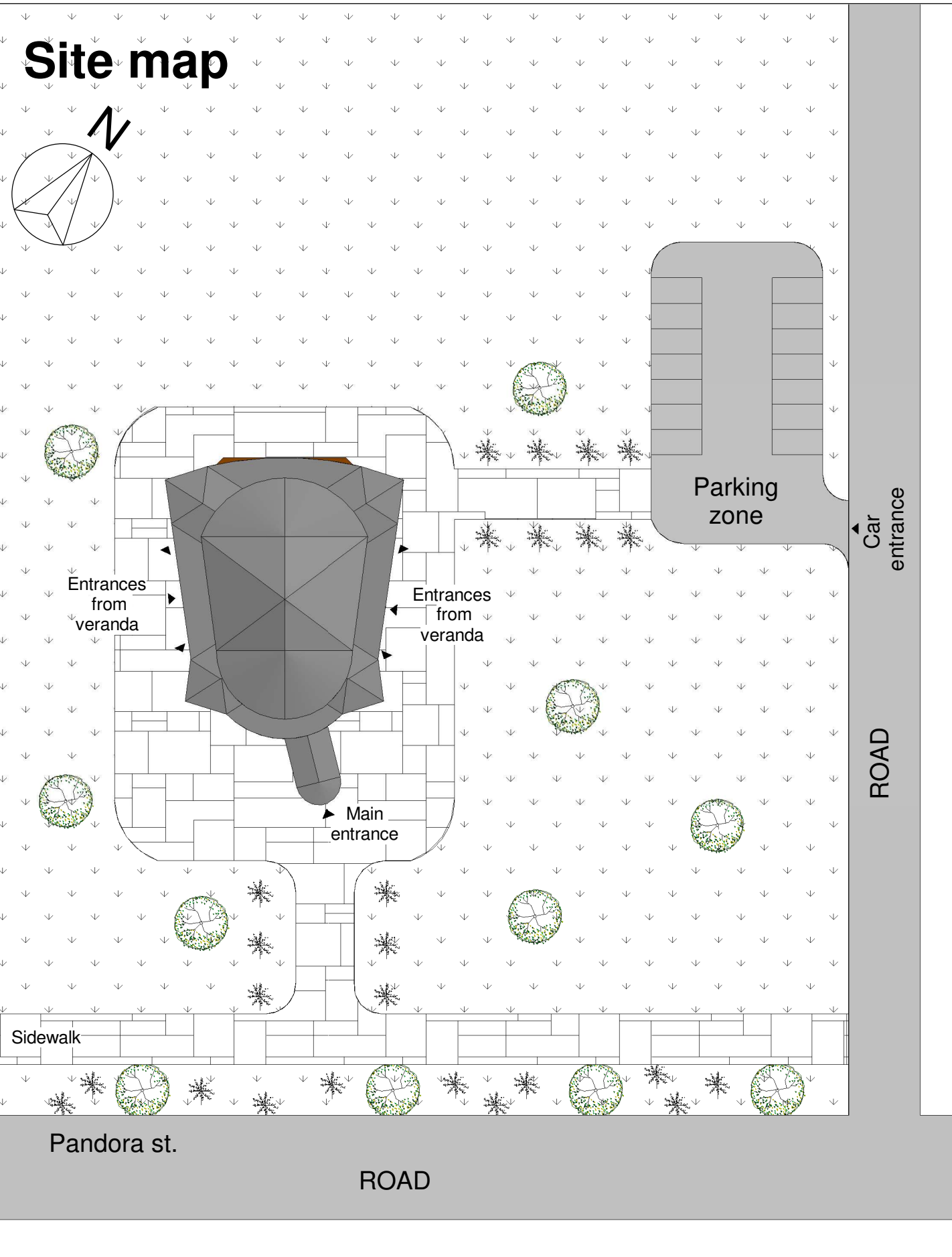


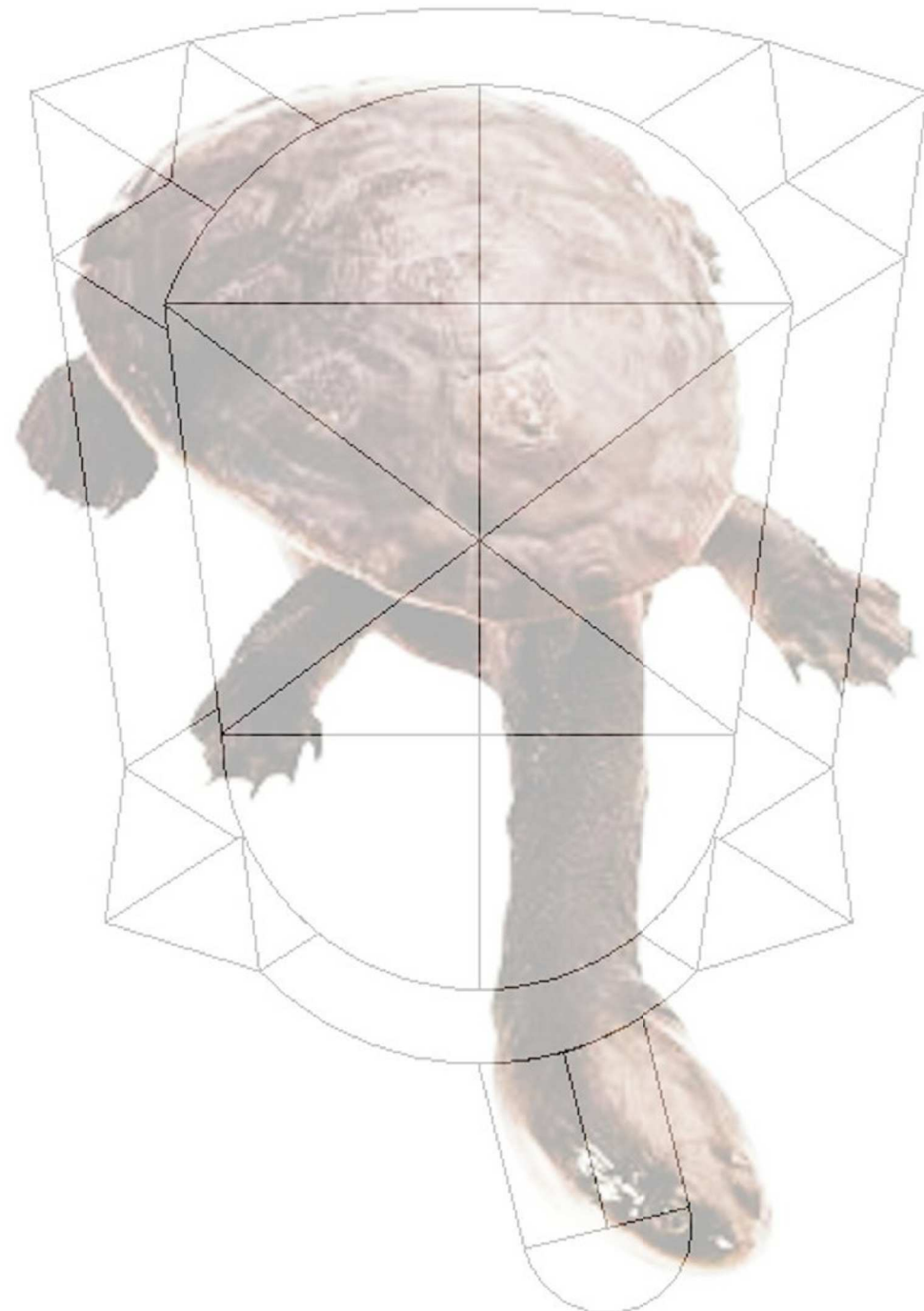


Initial requirements:

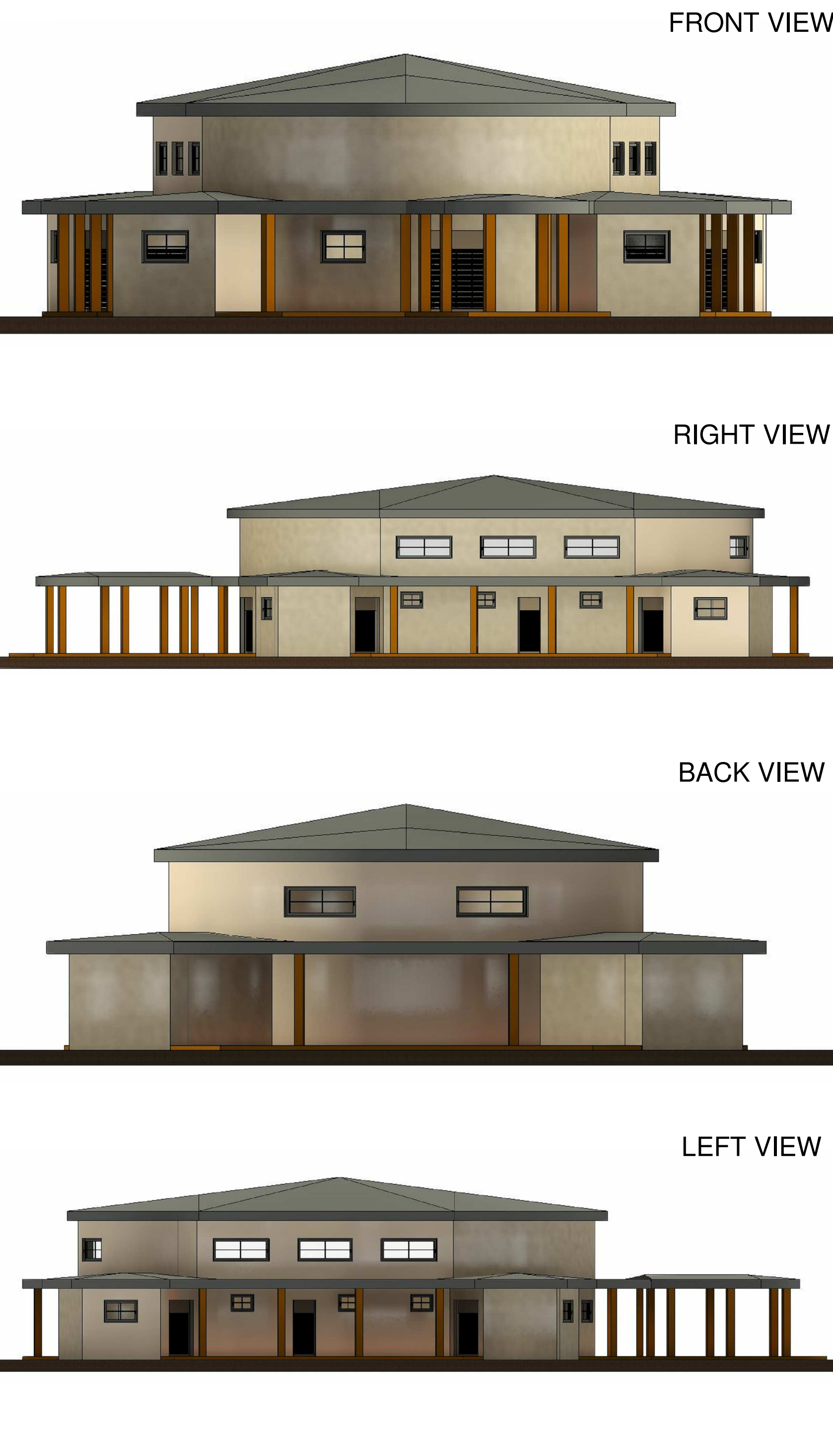
- multi-functional building in a shape of long-necked turtle
- verandas around whole structure for art activities
- preferred steel / wood load-bearing structure
- dimensions of the building: 10-12m wide and 18-25 lenght
- use required locking system, type of doors opened onto verandas
- disposition:
 - reception on the front of the building (approximately 3x4m)
 - gathering area for 50 people (approximately 12x6m)
 - toilets for males and females with separate entrances located at opposite ends of the building for cultural purposes
 - small kitchen for possibility to make some drinks or snack



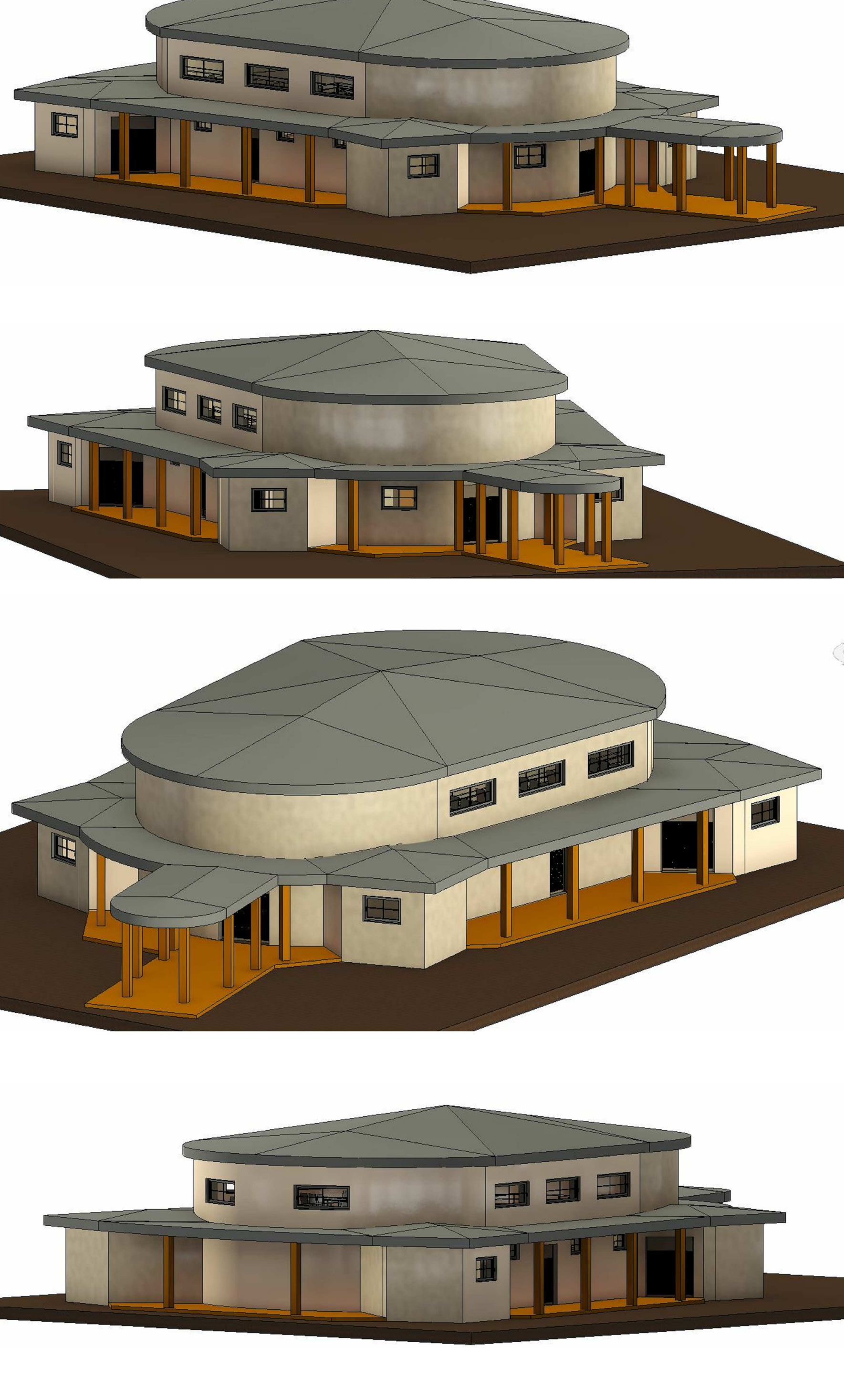
Long-necked turtle concept



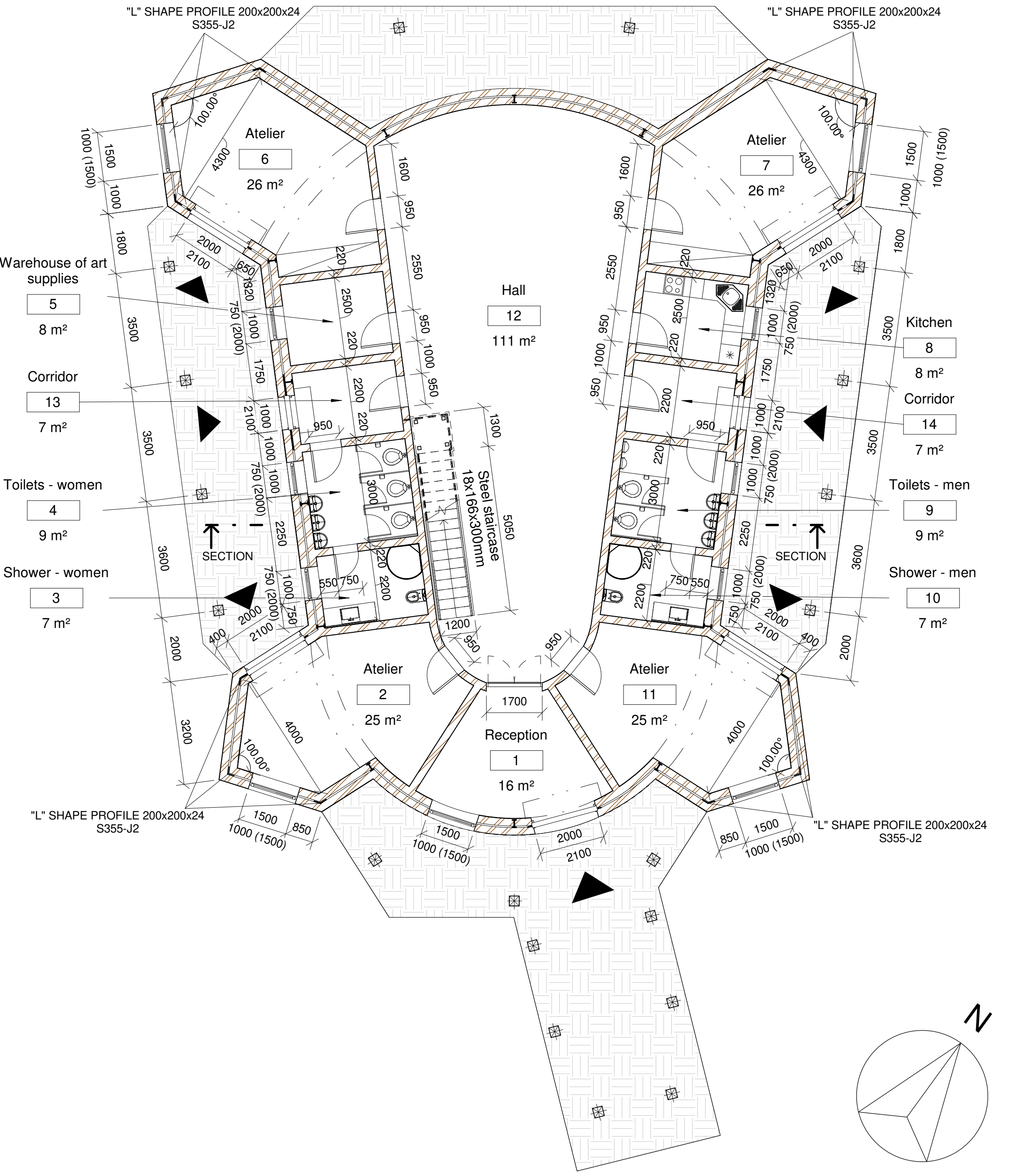
Views



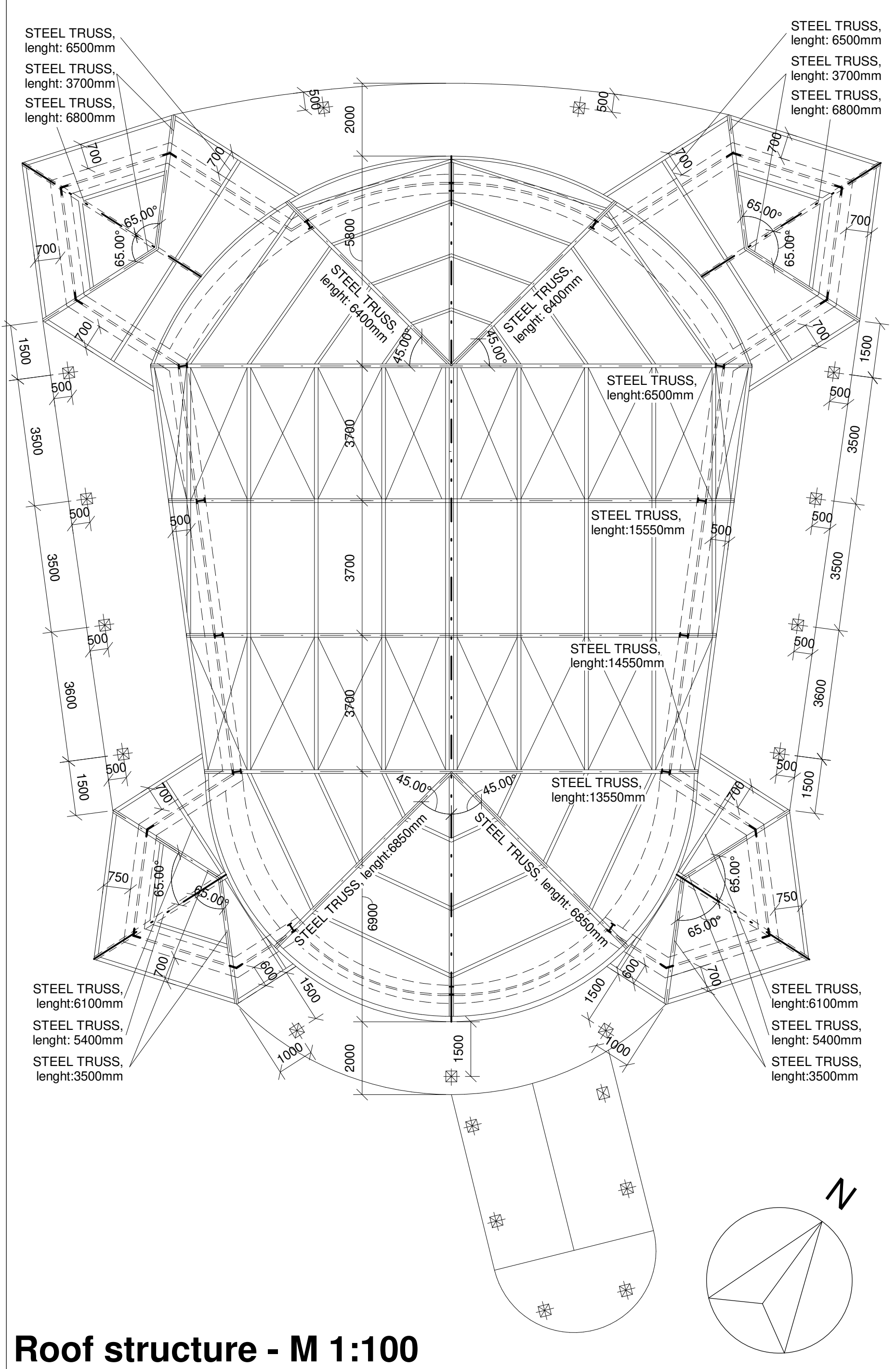
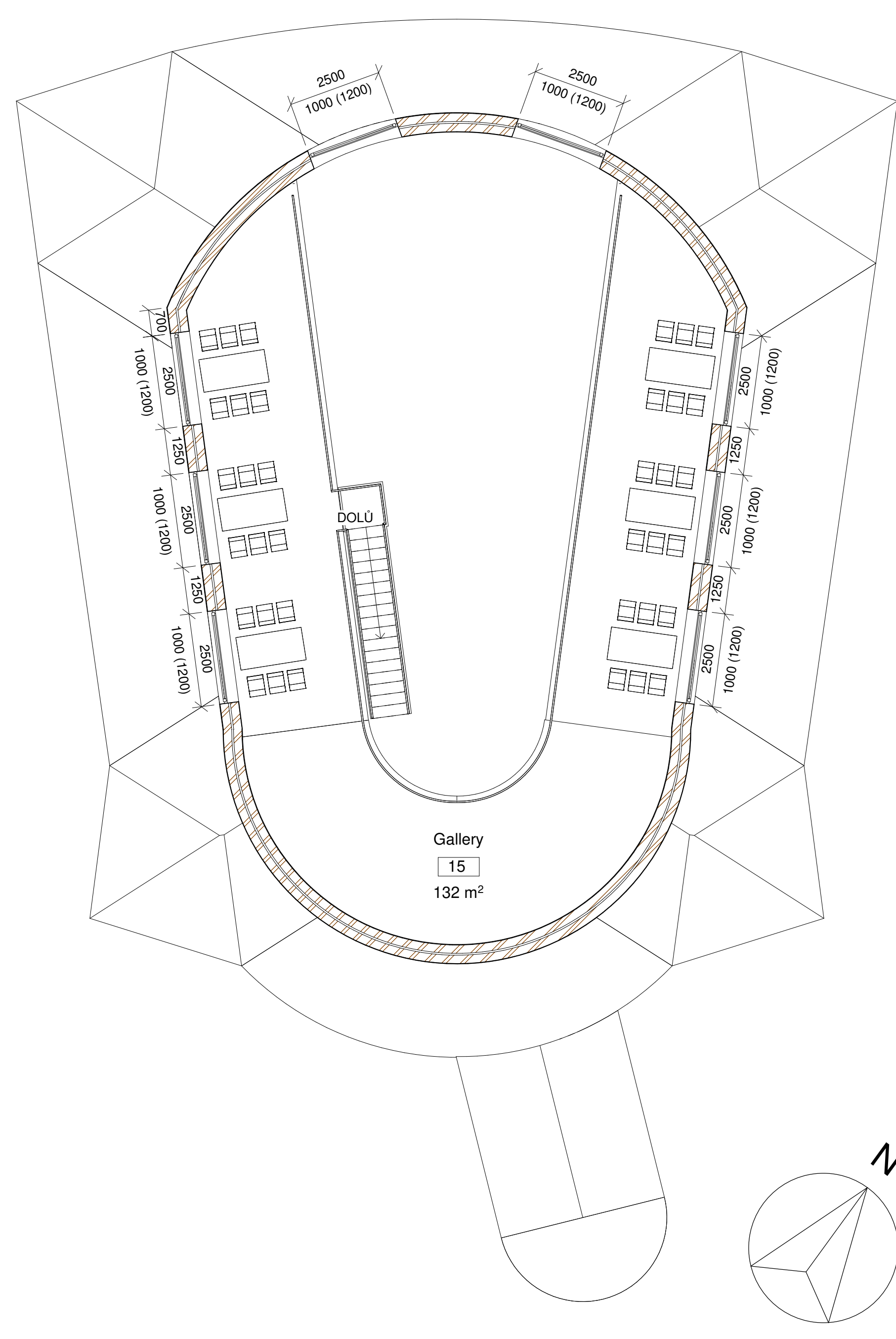
Perspective drawings



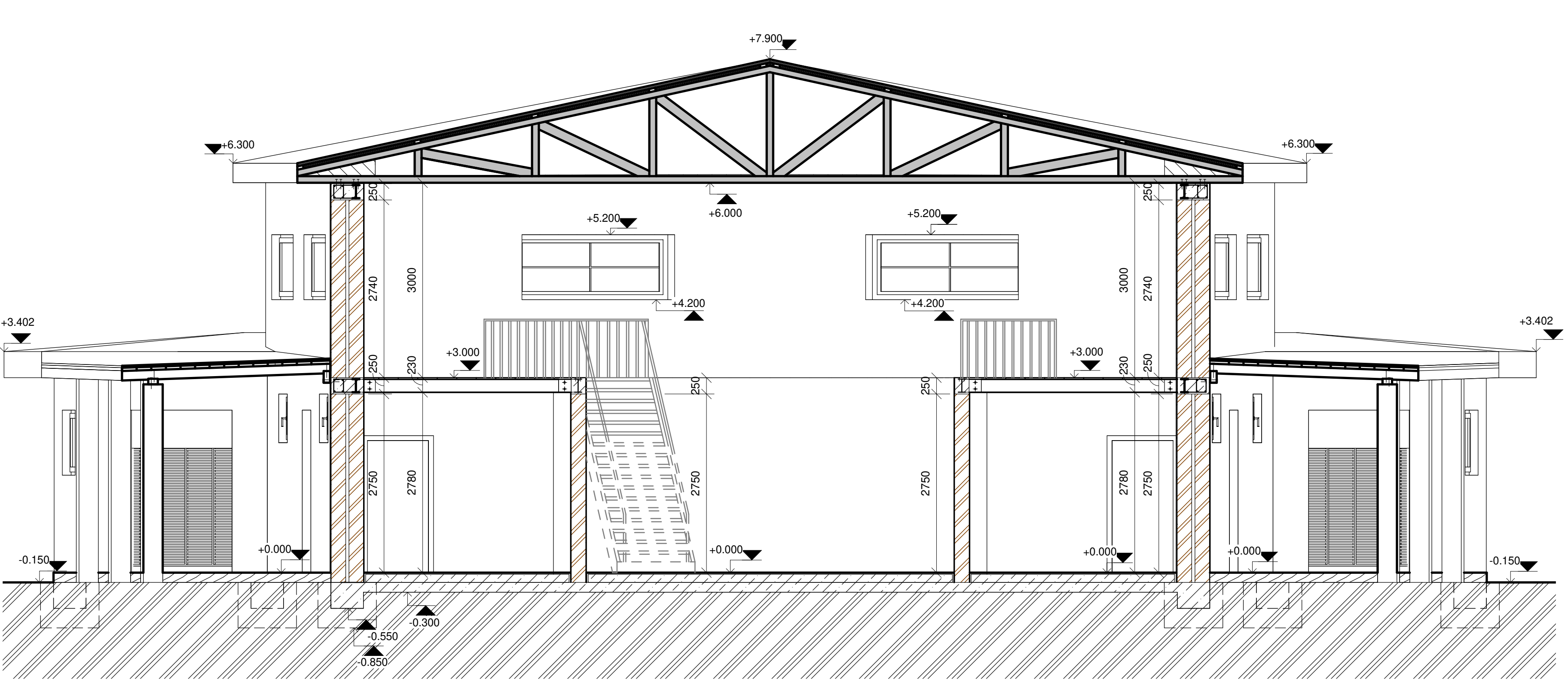
Ground floor plan - M 1:100



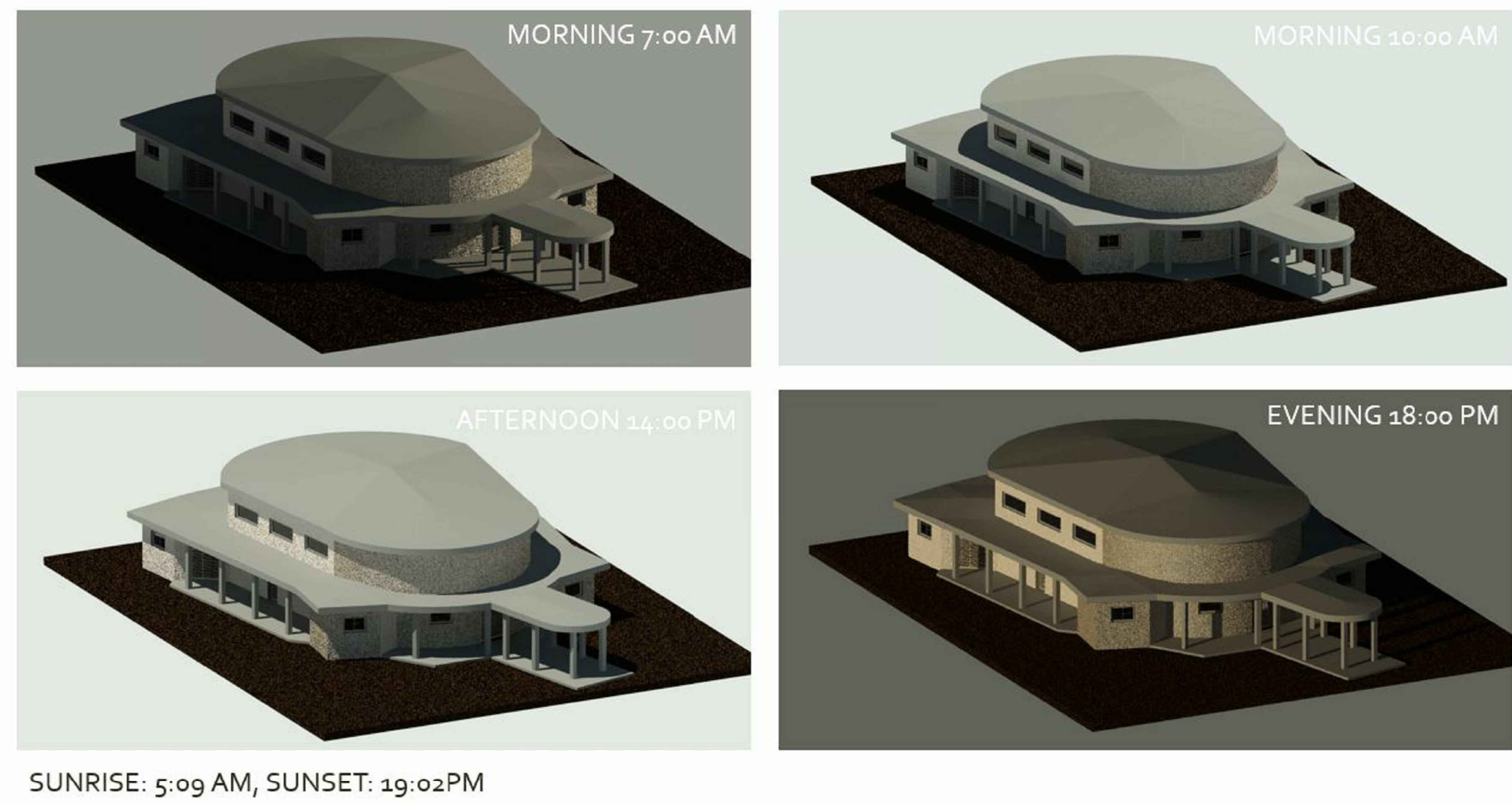
1st floor plan (Gallery) - M 1:100



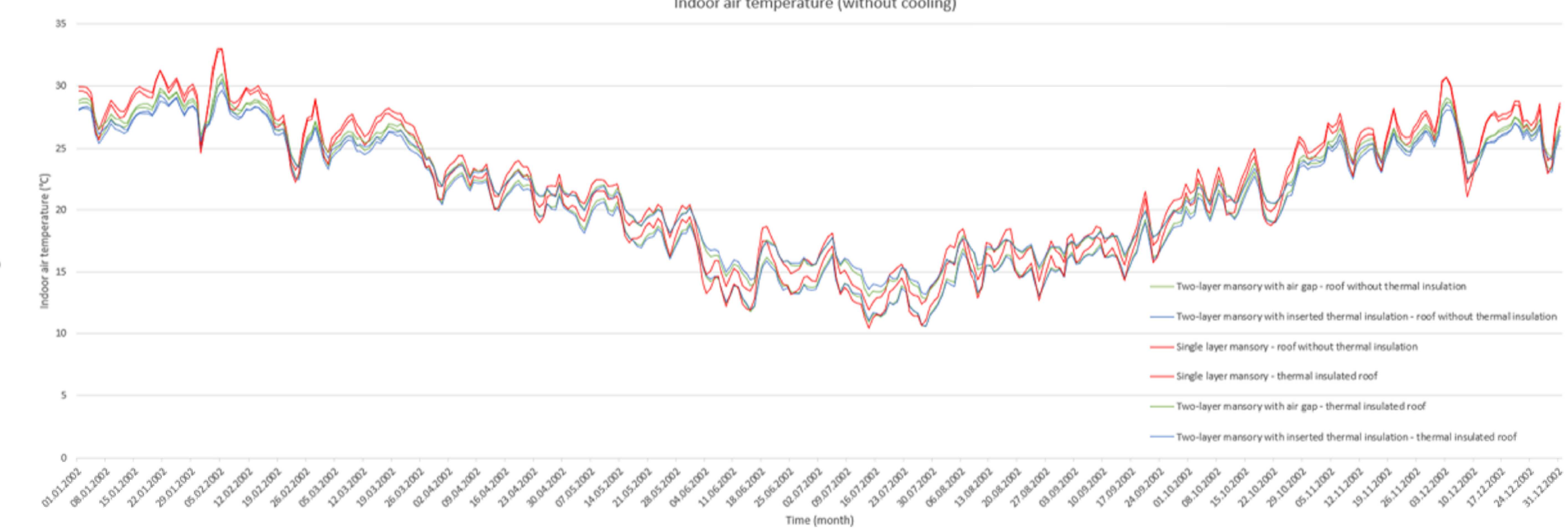
Cross section - M 1:50



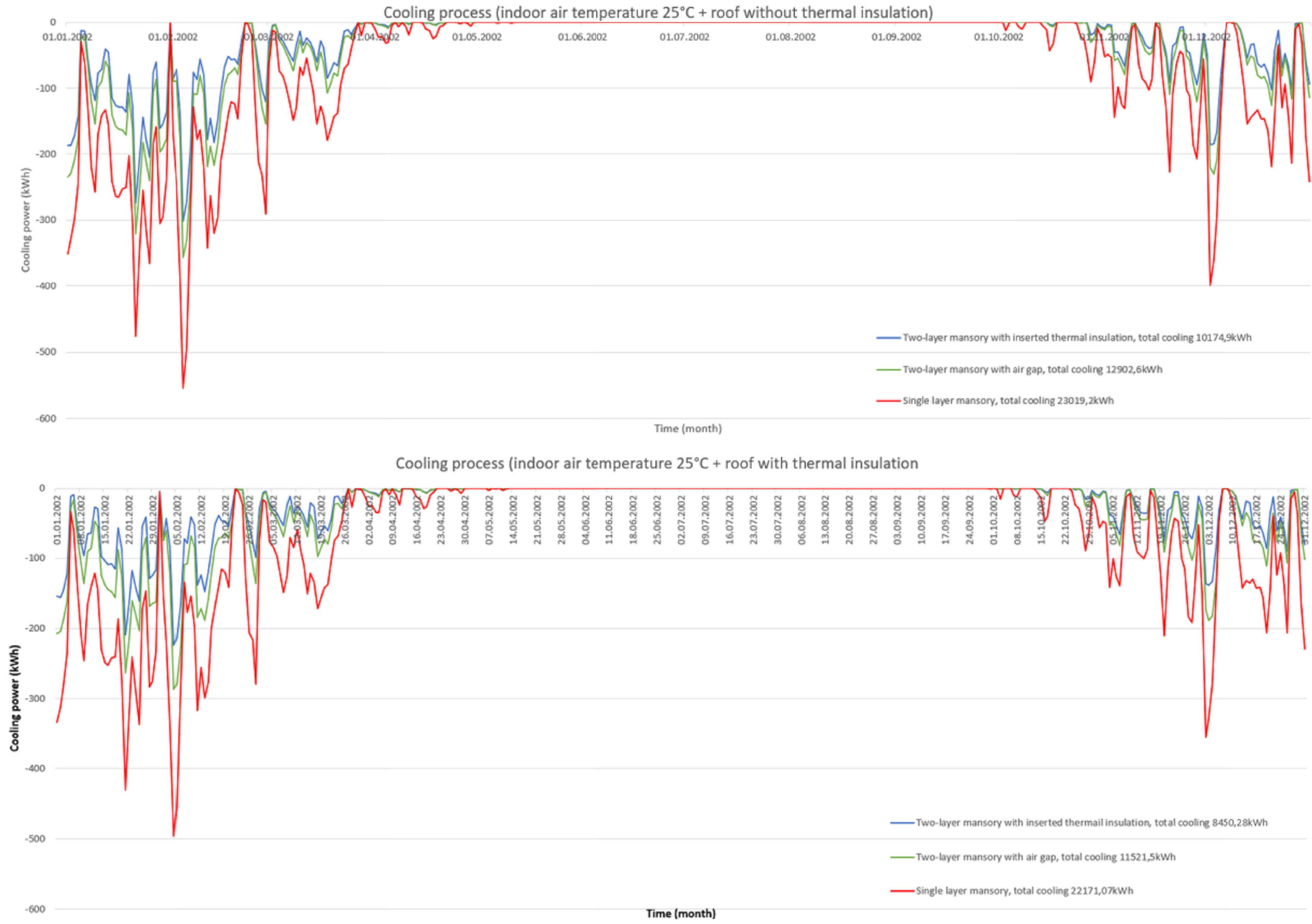
Sunlight analysis



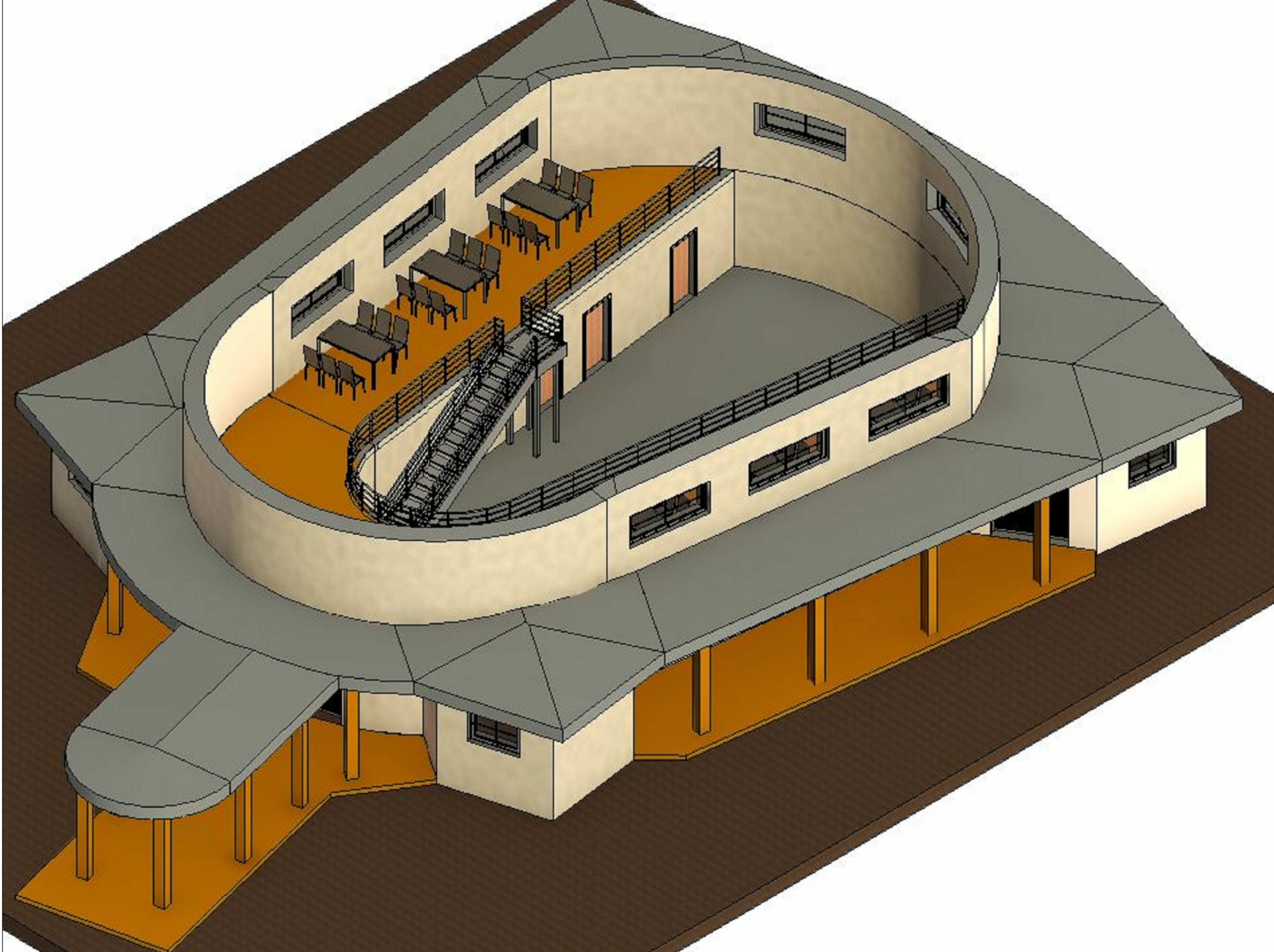
AIR TEMPERATURE ANALYSIS



COOLING ANALYSIS (ENERGY REQUIRED FOR COOLING THE OBJECT)



Visualization of gallery

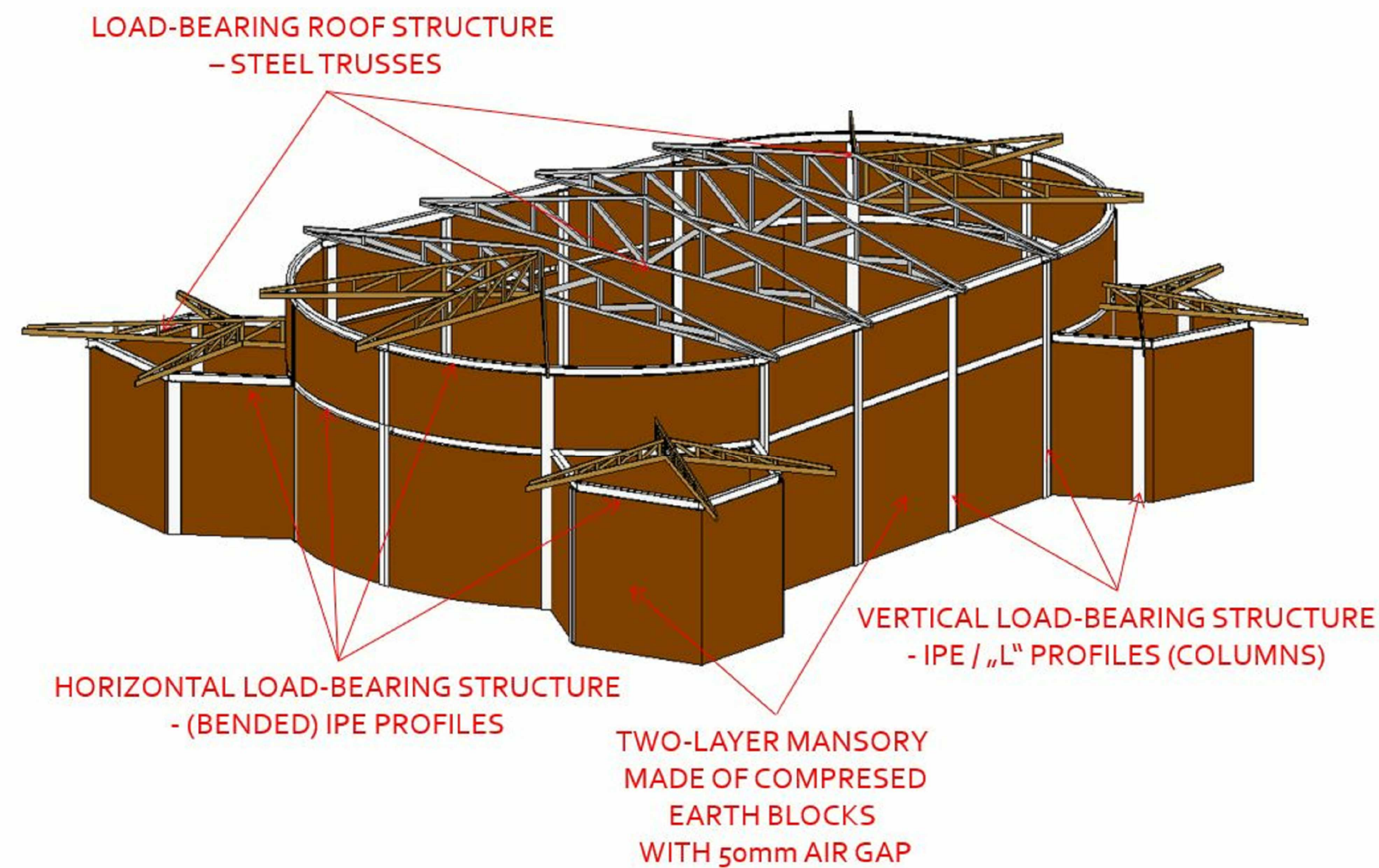


Constructional solution

The vertical load-bearing structure is designed of steel columns (IPE, HEB, "L" shape), horizontal load-bearing structure is designed of steel beams (also IPE/ HEB).
On the front and on the back of the bulding beams will be bent.
On the front of the building beams will be bent in radius 6 meters, on the back of the building will be bent on radius 8 meters.

An infill masonry between the steel columns is made of compressed earth blocks. Due to the thermal stability of the building was chosen a two-layer masonry with air gap - total width of masonry: 490mm (2 x 220 mm compressed blocks + 50 mm air gap).

Roof above the main space (above masonry) was designed as a steel structure (steel trusses + steel beams, and other profiles...).
Roofs above verandas was designed as a wooden structure (wooden columns rafters, beams...).



The space under roof was divided into „two floors“, which enabled the creation of gallery. Ceilings above side rooms are made of wooden beams (rafters) on which are planks nailed.
Staircase and railings were designed as a simple steel structure.

The floor in the ground floor was designed as a concrete slab without top layer. There can be add any top layer that will be required.

Design of solar split air system - AC/DC

