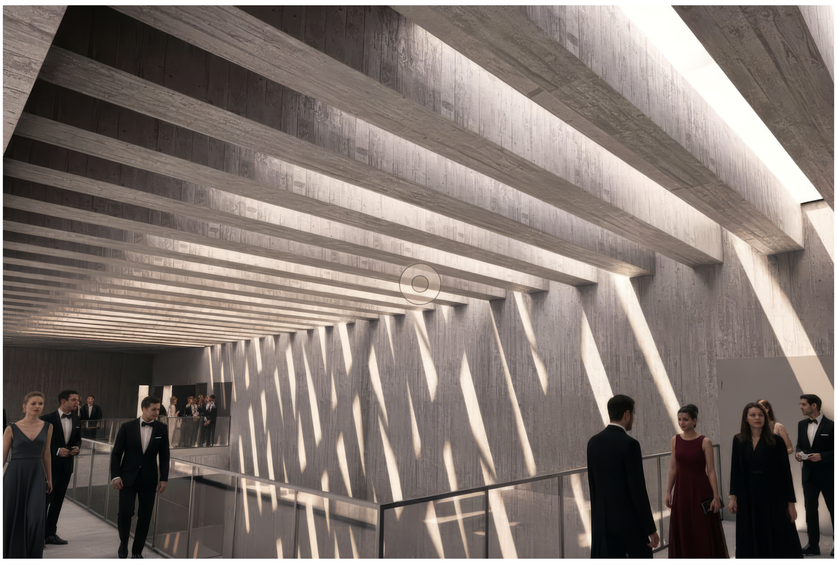
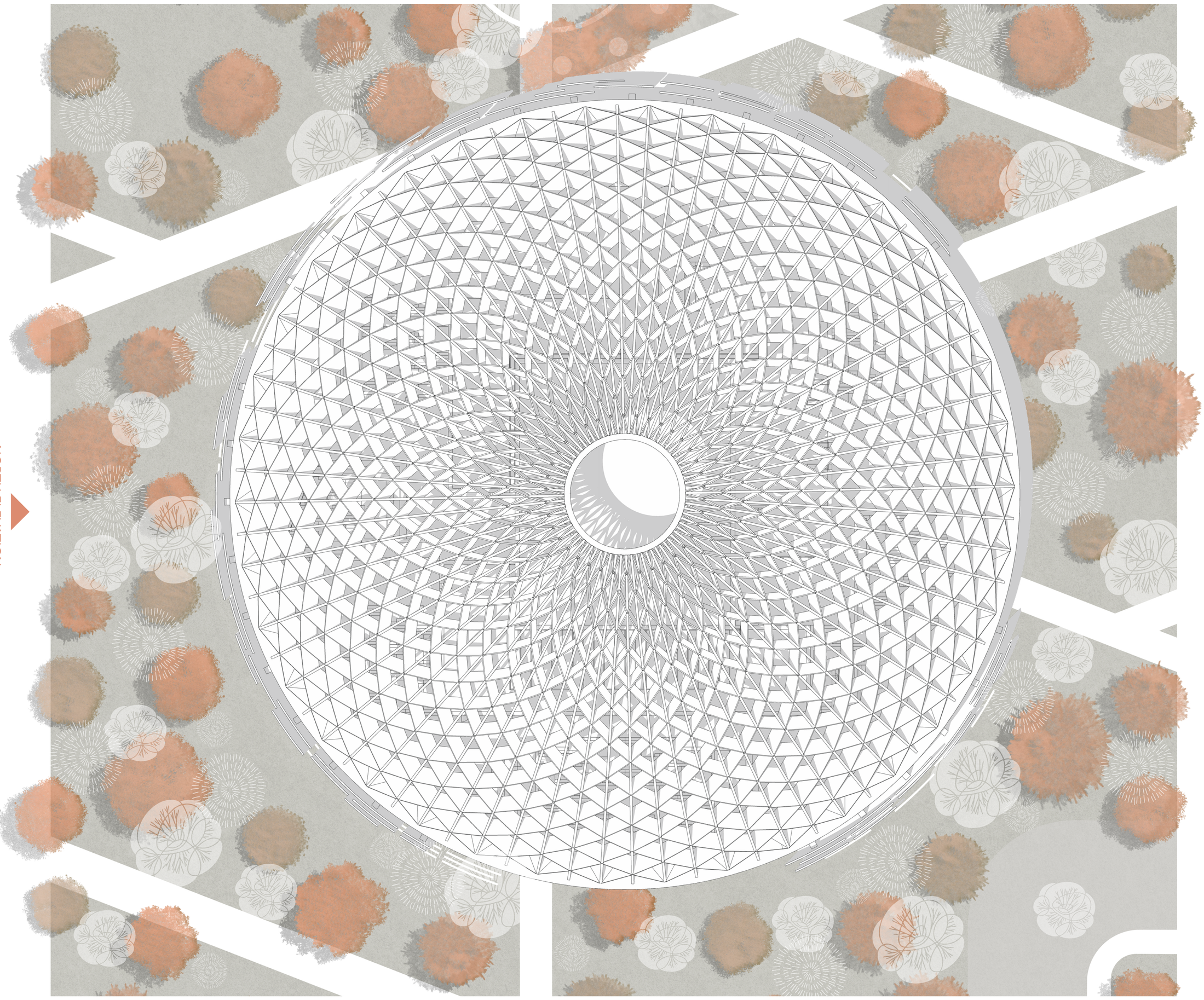
House of Music
Spatial Experience

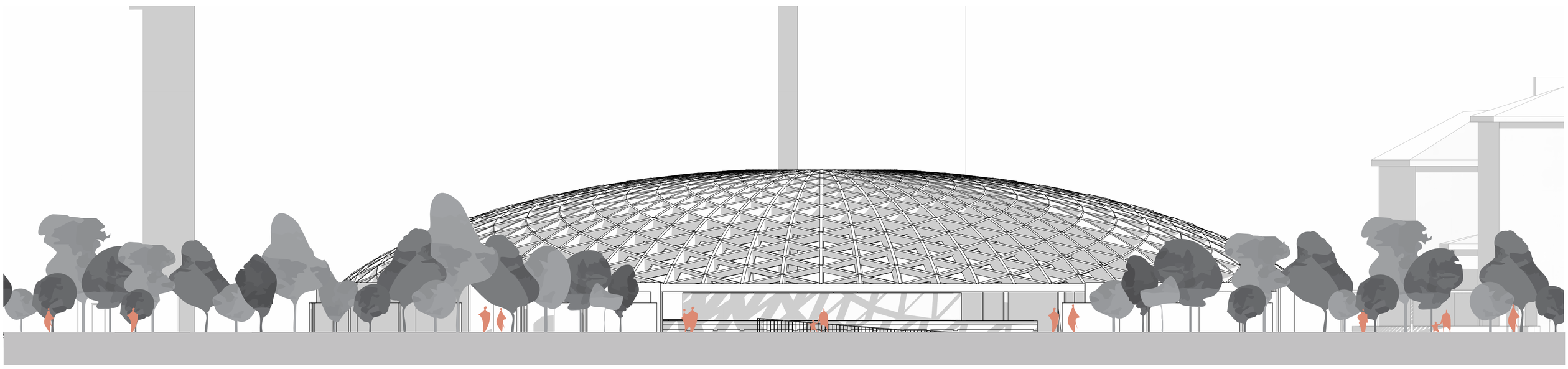




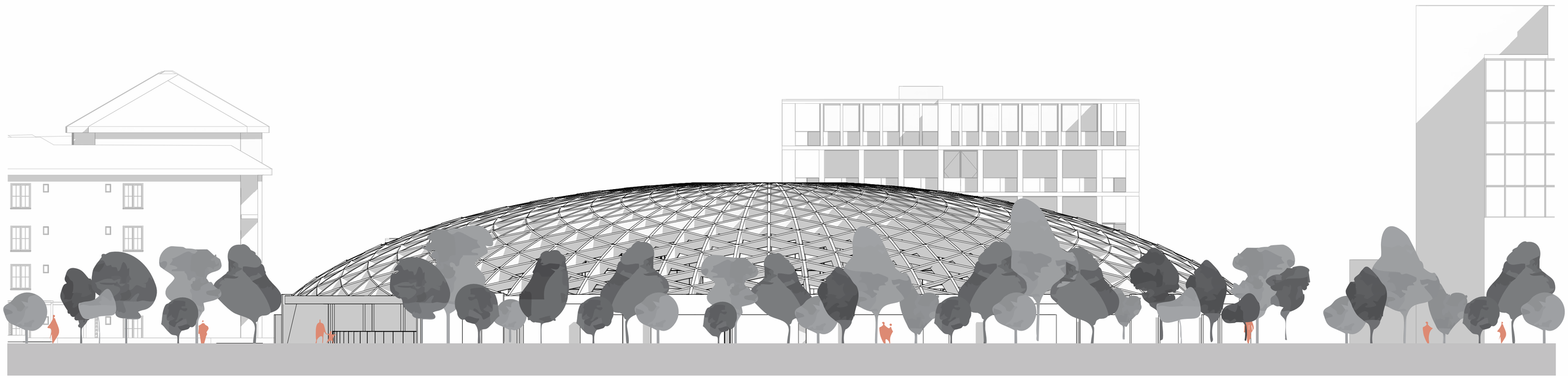
NORTH ELEVATION

ROOF PLAN 1:200

WEST ELEVATION



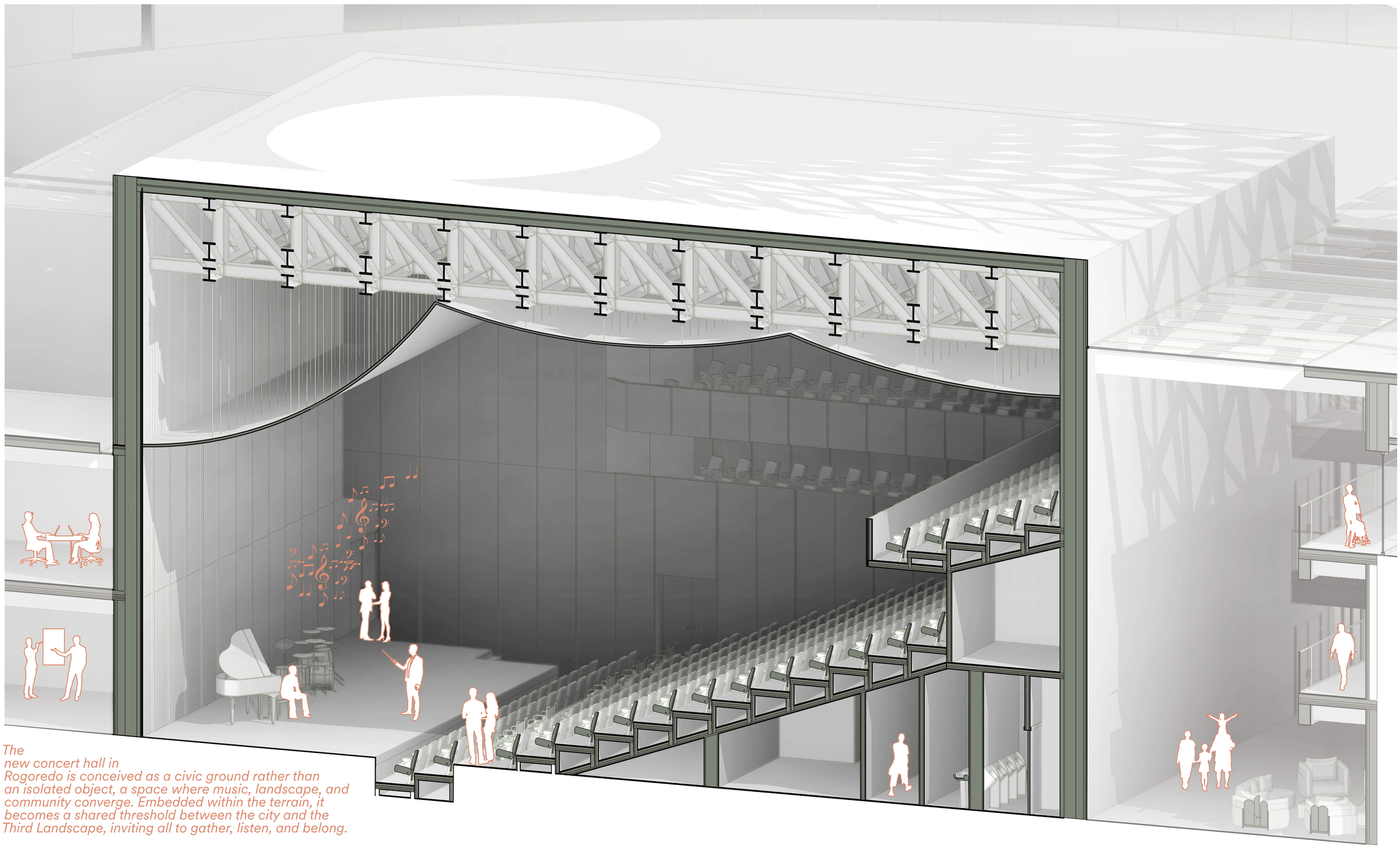
WEST ELEVATION: BUILDING ENTRANCE 1:200



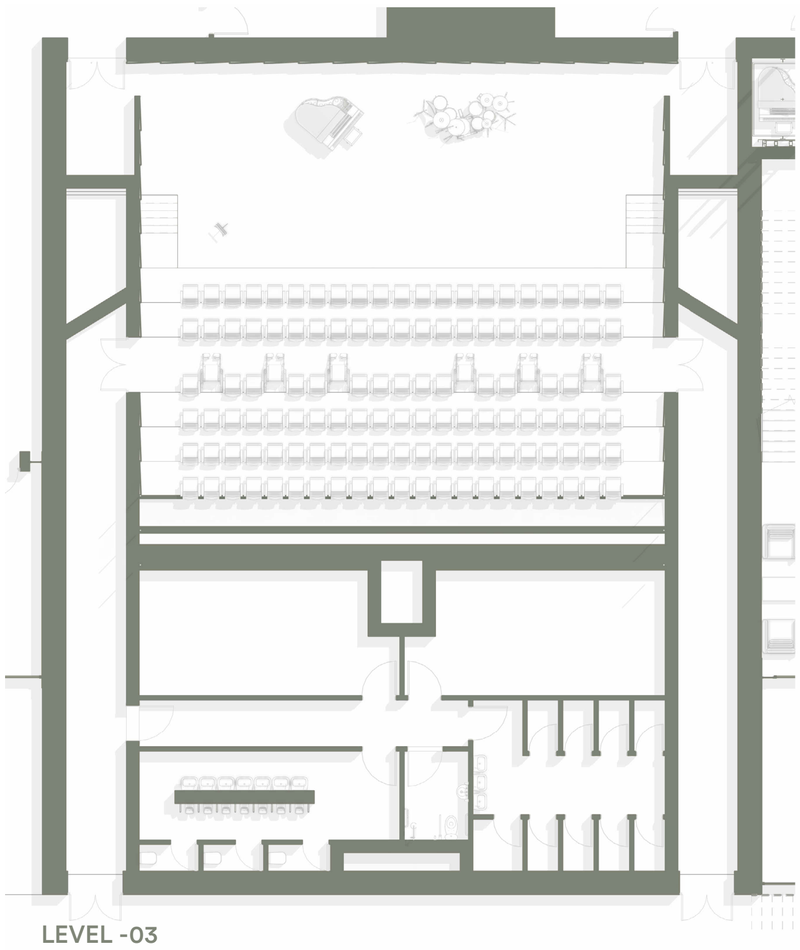
NORTH ELEVATION: VIEW FROM STREET 1:200

Chamber of Music

with seating for 480 people

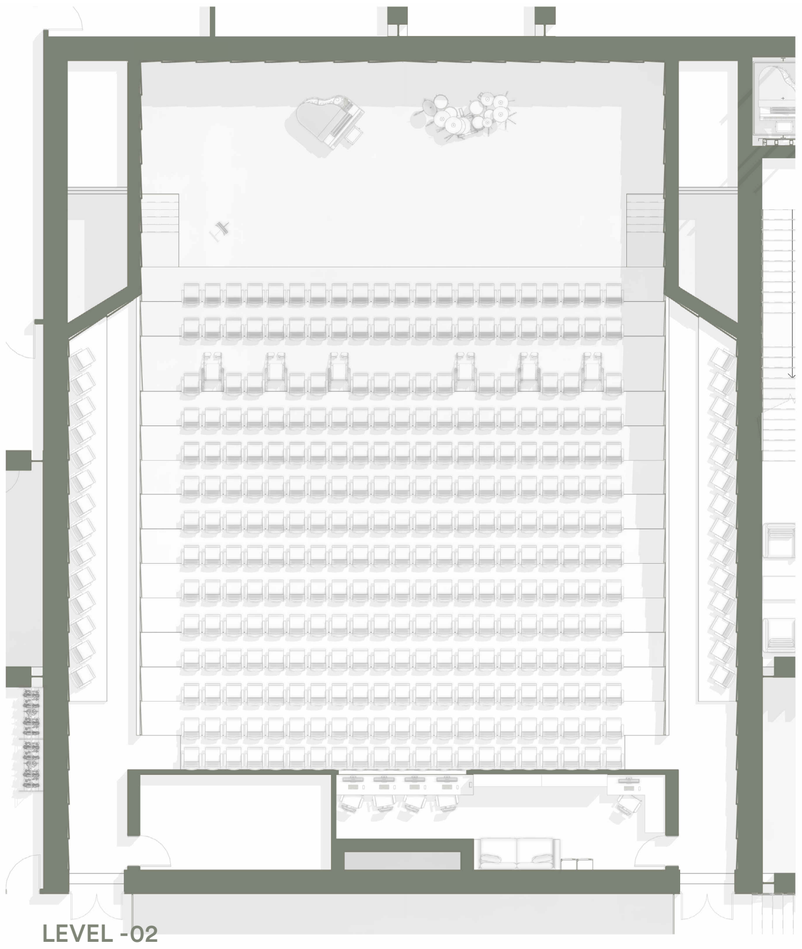


The new concert hall in Rogoredo is conceived as a civic ground rather than an isolated object, a space where music, landscape, and community converge. Embedded within the terrain, it becomes a shared threshold between the city and the Third Landscape, inviting all to gather, listen, and belong.



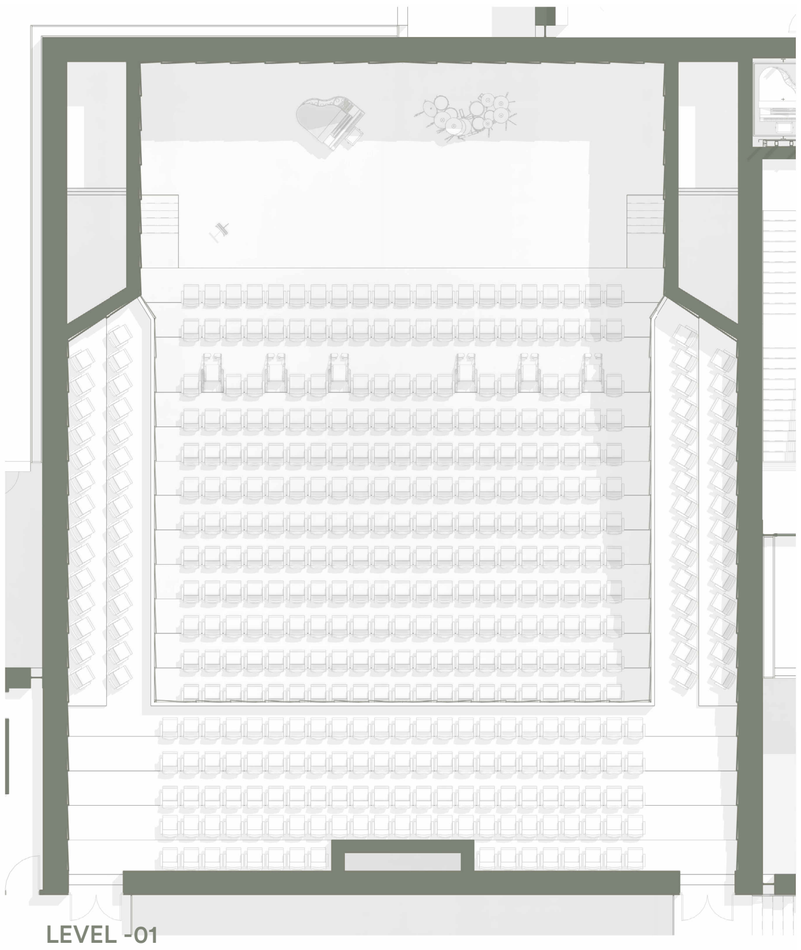
LEVEL -03

1:125



LEVEL -02

1:125



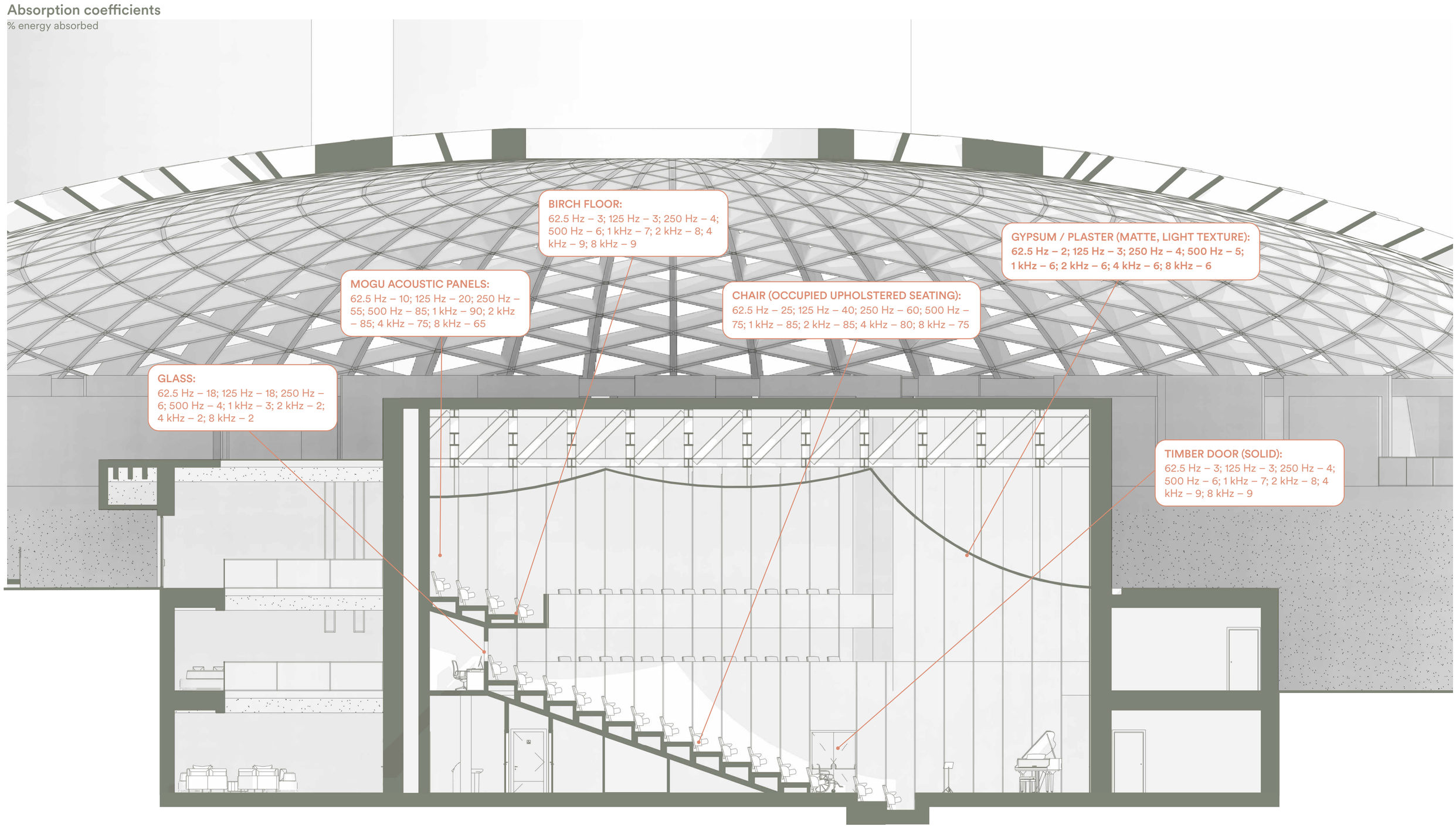
LEVEL -01

1:125

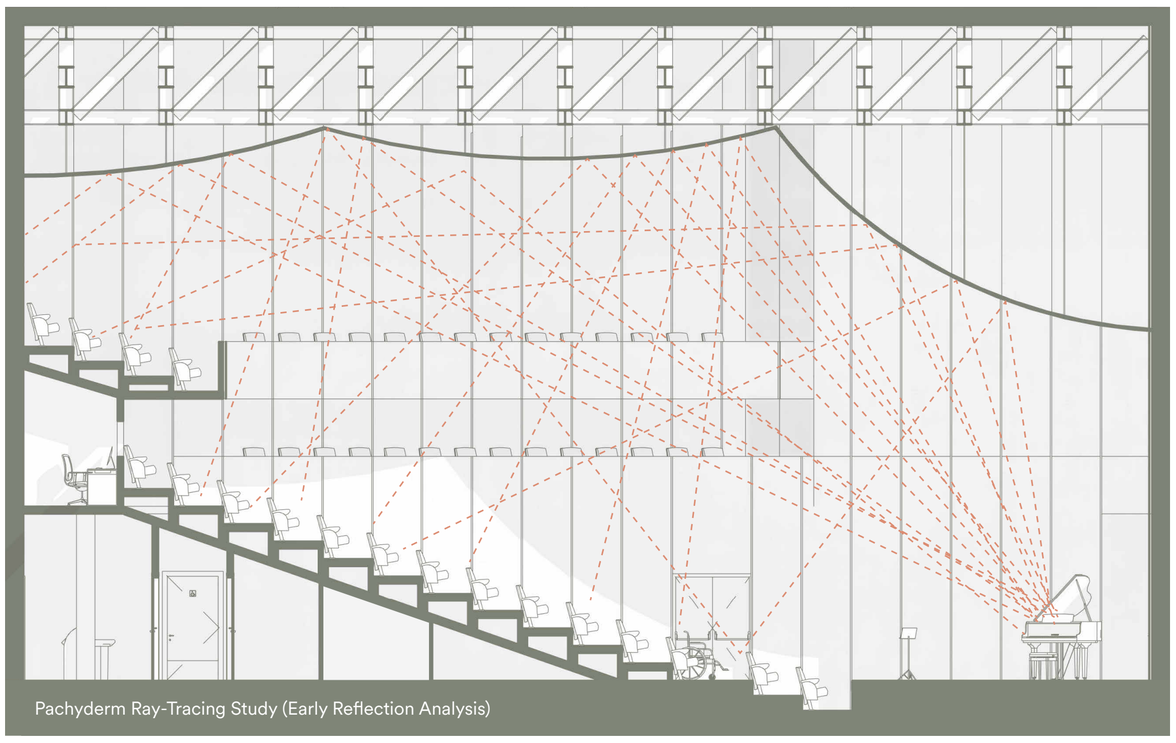
Acoustic Performance

Absorption coefficients

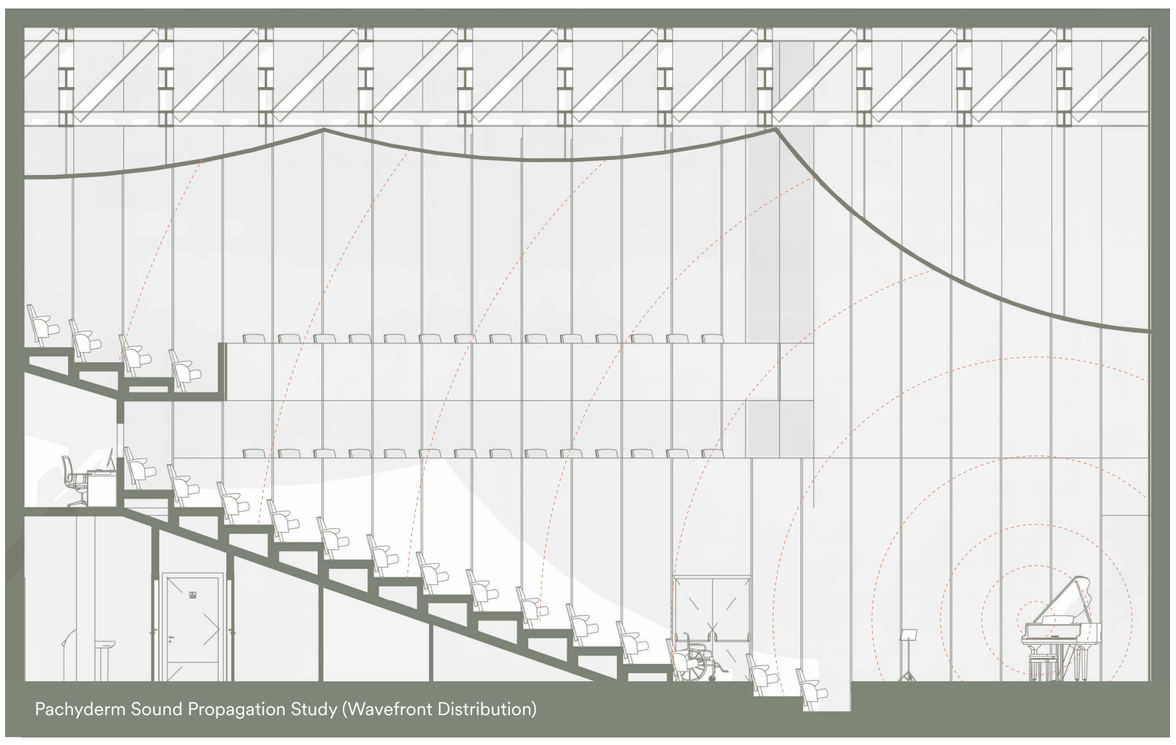
% energy absorbed



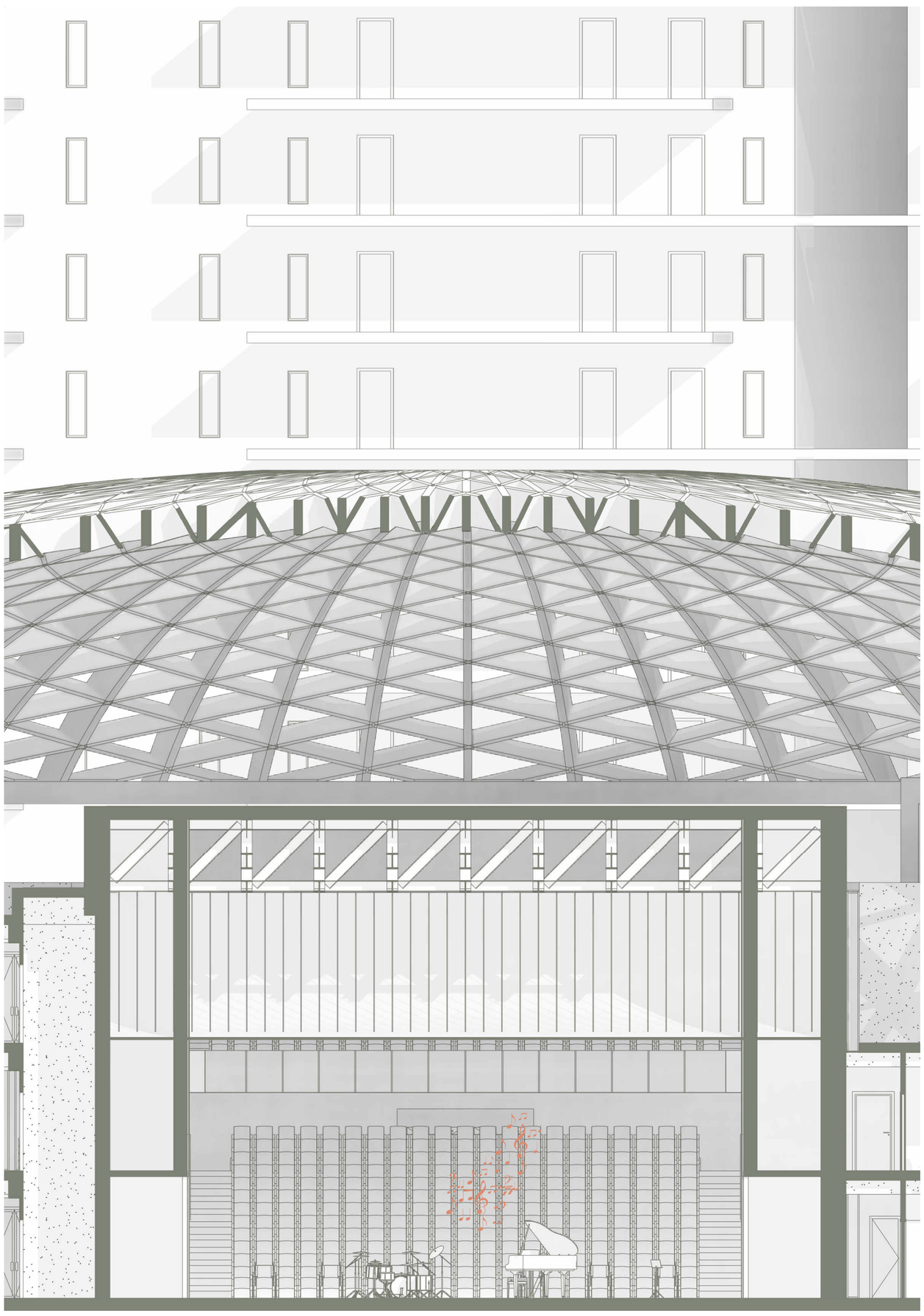
For an occupied performance, the acoustic strategy balances reflective mass with controlled absorption. The sculpted plaster/gypsum ceiling & panels (2-5%) together with birch timber flooring (3-9%) form a predominantly reflective envelope that preserves early sound energy and spatial warmth. Most wall surfaces remain reflective to maintain lateral envelopment, while Mogu acoustic panels (60–90%) are used selectively at rear and upper zones to control late reflections and prevent flutter echo. Occupied upholstered seating (40-85%) provides the primary mid- and high-frequency absorption once the hall is filled. With a volume of approximately 3,795 m³ & limited absorptive coverage, the hall is calibrated to achieve a mid-frequency reverberation time of roughly 1.8-2.0 seconds (500-1000 Hz), supporting both resonance & clarity.



Pachyderm Ray-Tracing Study (Early Reflection Analysis)



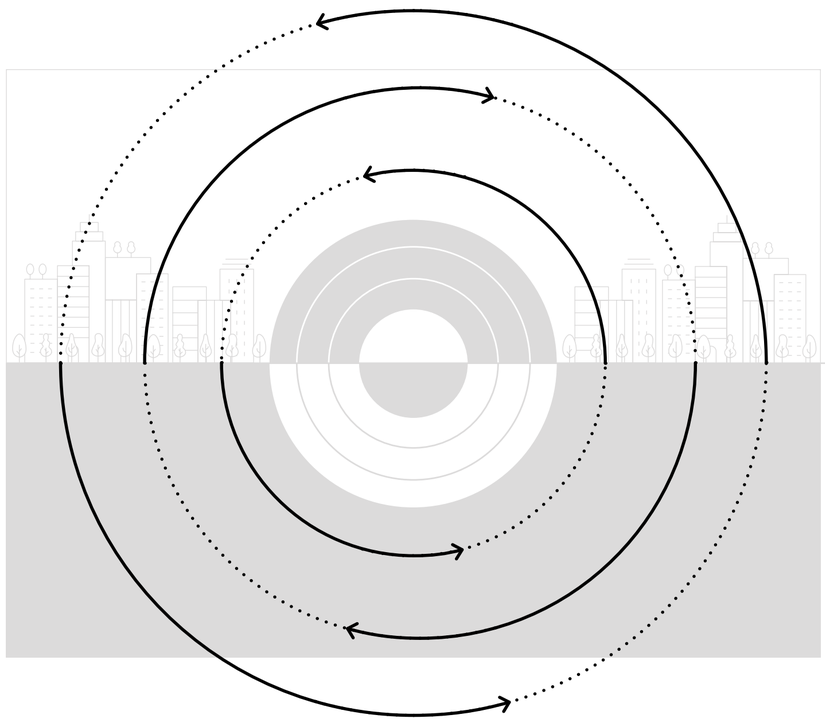
Pachyderm Sound Propagation Study (Wavefront Distribution)



Ethics of Permanence and Circularity

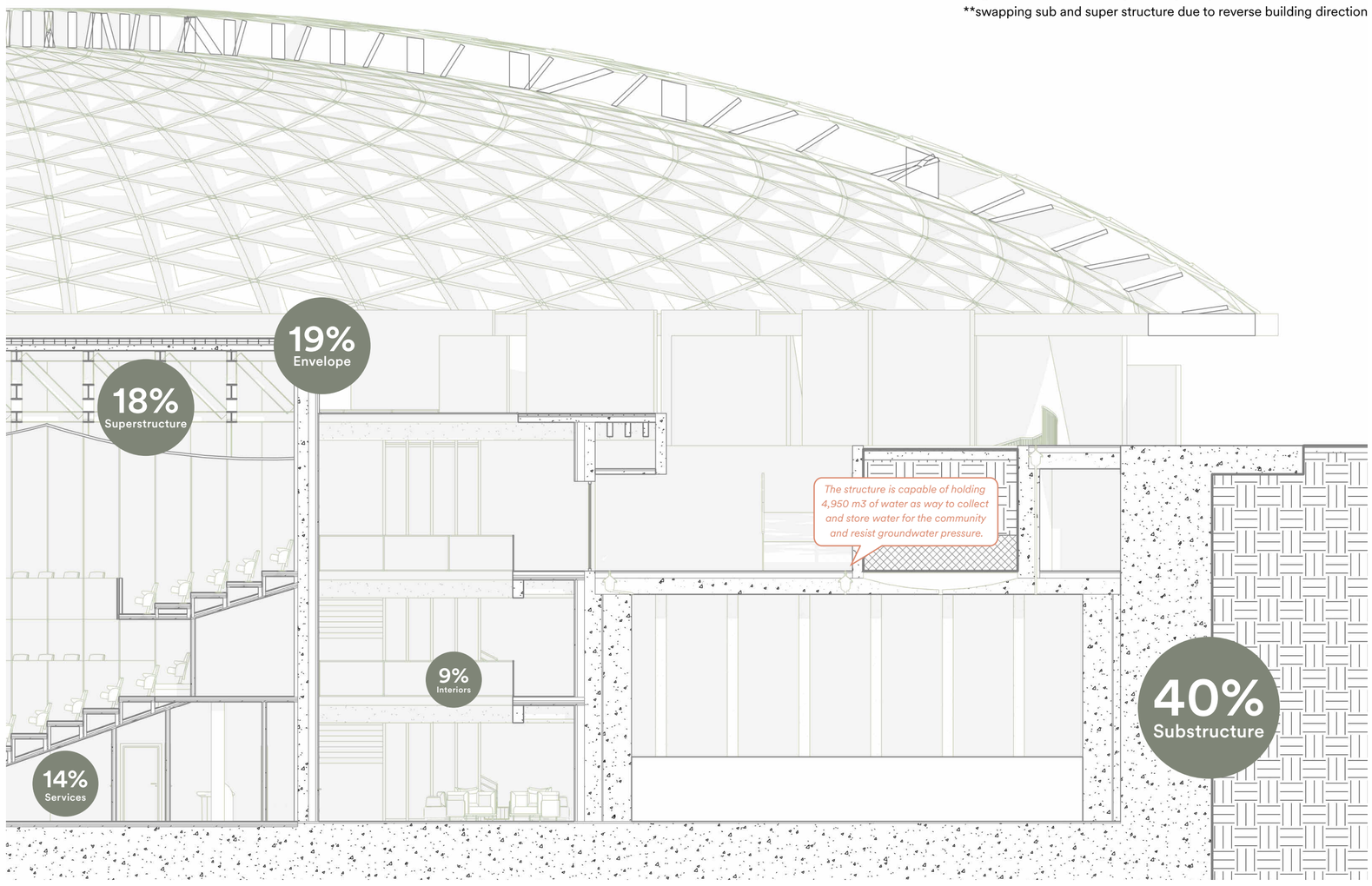
In an era of accelerated construction cycles, planned obsolescence, and low quality, disposable architecture, this project proposes an ethic of permanence.

Permanence is not rigidity, but responsibility: designing structures that endure physically, adapt socially, and regenerate ecologically. In Italy, where concrete monuments have stood for centuries as civic anchors embedded in the landscape, permanence is understood as cultural continuity rather than excess. Circularity is therefore approached not as a technical checklist, but as a spatial strategy, embedding reuse, reversibility, and material stewardship into the architecture of the ground. The project resists disposability; it settles into the terrain, endures across generations, and evolves without erasure.



Average carbon footprint proportion per zone

**swapping sub and super structure due to reverse building direction



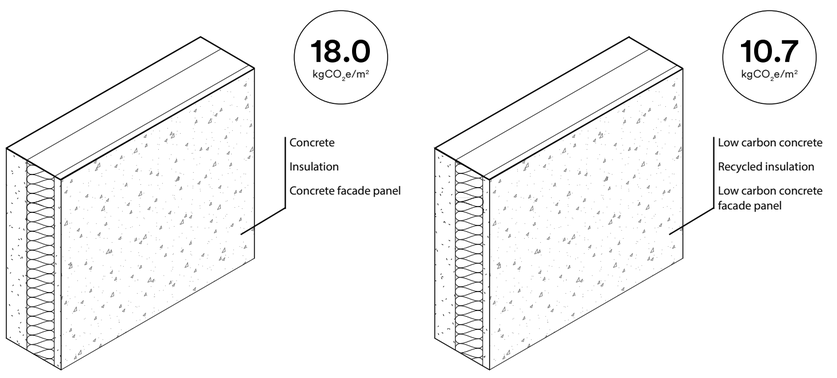
Monolithic concrete substructure

The primary structural system consists of a reinforced concrete substructure embedded within the terrain, forming the long-life civic foundation of the project. The total concrete volume amounts to around 20,000 m³, reflecting the structural demands of the subterranean performance spaces and the project's commitment to long-term durability.

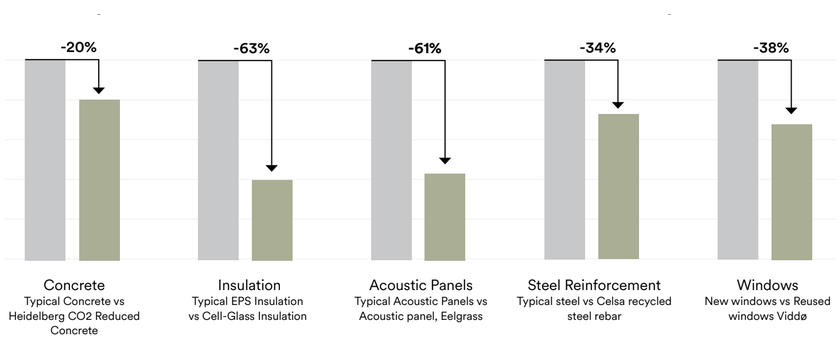
Extended service life

Reduced maintenance requirements

Durability under ground conditions



Carbon footprint distribution of elements



Understanding the impact of each material section

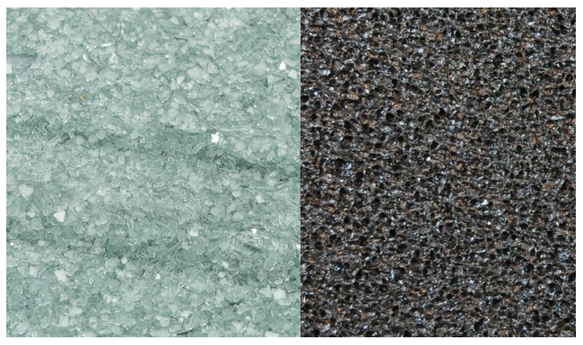
BASEMENT WALLS	GROUND FLOOR SLAB STRUCTURE	GROUND FLOOR SLAB INSULATION	COLUMNS AND BEAMS	WALLS
Concrete C40/50 **(452 kgCO2e/m3)** + virgin steel rebar **(2,29 kgCO2e/kg)**	Concrete C30/37 **(437,36 kgCO2e/m3)** + virgin steel rebar **(2,29 kgCO2e/kg)**	EPS **(132,6 kgCO2e/m3)**	Concrete C40/50 **(452 kgCO2e/m3)** + virgin steel rebar **(2,29 kgCO2e/kg)**	Concrete C40/50 **(452 kgCO2e/m3)** + virgin steel rebar **(2,29 kgCO2e/kg)**
Low carbon concrete C40/50 **(325,41 kgCO2e/m3)** + recycled steel rebar **(1,26 kgCO2e/kg)**	Low carbon concrete C30/37 **(266,49 kgCO2e/m3)** + recycled steel rebar **(1,26 kgCO2e/kg)**	Cellular glass insulation **(1,7 kgCO2e/m3)**	Low carbon concrete C40/50 **(325,41 kgCO2e/m3)** + recycled steel rebar **(1,26 kgCO2e/kg)**	Low carbon concrete C40/50 **(325,41 kgCO2e/m3)** + recycled steel rebar **(1,26 kgCO2e/kg)**

STRUCTURE	INT. CLADDING	GLAZING	ROOF SLAB	ROOF MATERIAL
Concrete C40/50 **(452 kgCO2e/m3)** + virgin steel rebar **(2,29 kgCO2e/kg)**	Plaster, primer, and paint **(2,3 kgCO2e/m2)**	Curtain walls, double glazing tempered glass, alu frame **(170,3 kgCO2e/m2)**	Concrete C30/37 **(437,36 kgCO2e/m3)** + virgin steel rebar **(2,29 kgCO2e/kg)**	Bitumen **(6,8 kgCO2e/m2)**
Low carbon concrete C40/50 **(325,41 kgCO2e/m3)** + recycled steel rebar **(1,26 kgCO2e/kg)**	Clay Plaster **(0,031 kgCO2e/m2)**	Recycled aluminium frame window **(117 kgCO2e/m2)**	Hollowcore Deck **(0,0894 kgCO2e/kg)**	Bitumen tiles made from recycled components **(2,67 kgCO2e/m2)**

Prioritizing reclaimed, recycled, and bio-based materials within a design framework that enables long-term reuse and material recovery.

Low carbon cement with local recycled crushed aggregates

Recycled steel reinforcement



Cell-glass made of recycled glass for slab insulation

Windows made from reused products

Clay plaster made from local sourced product

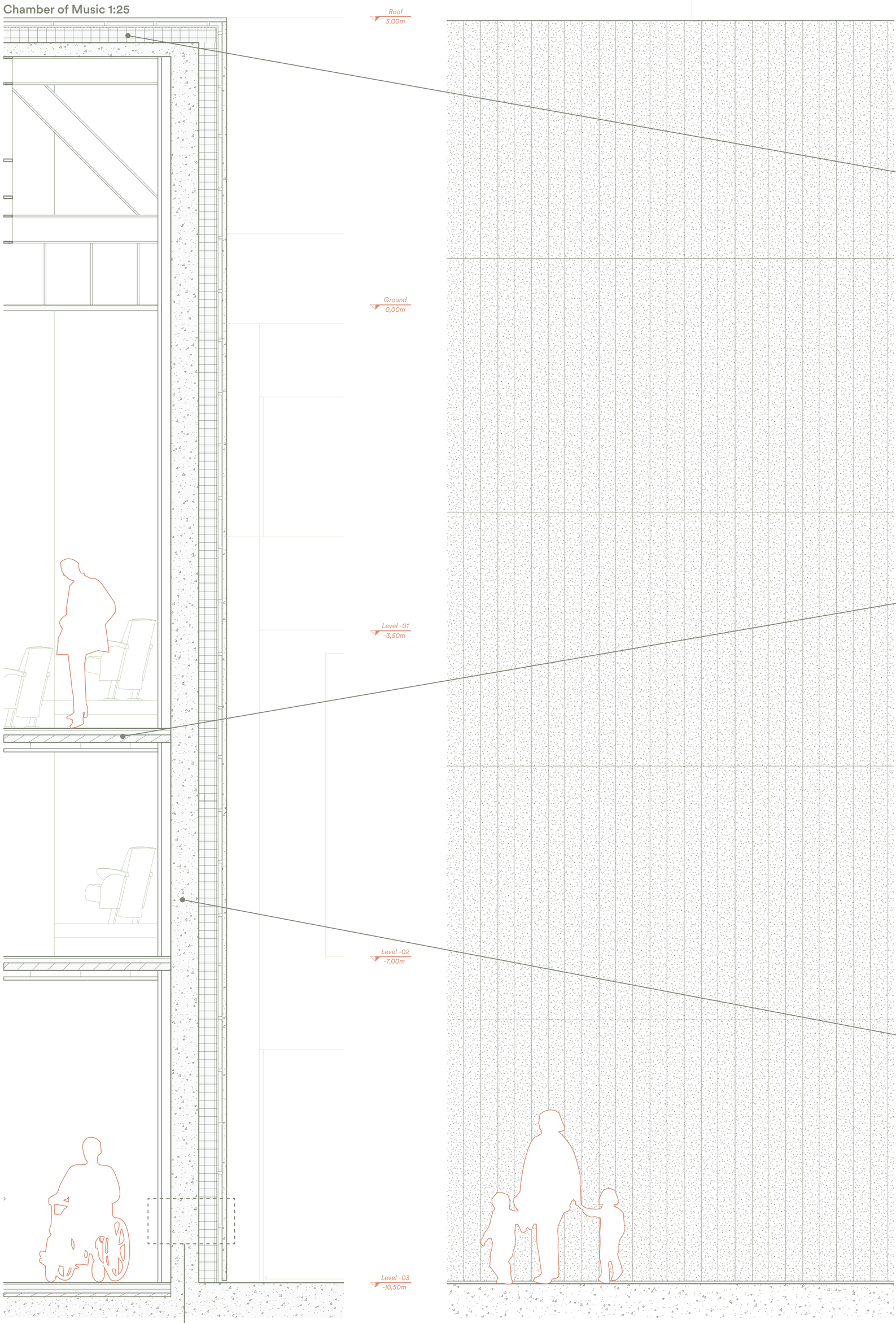
Acoustic panels made from eelgrass

Screed made from recycled aggregates

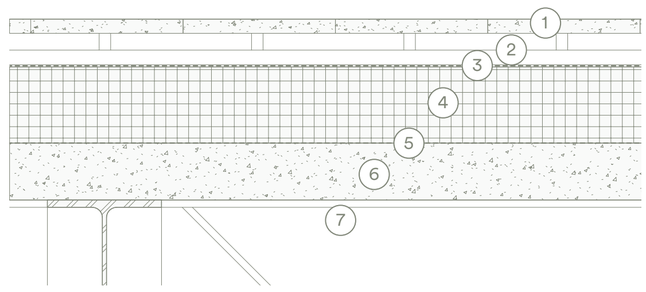
Insulation composed of recycled cork

Material Systems

Chamber of Music 1:25

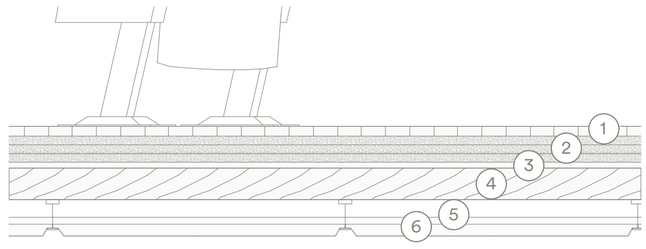


Chamber of Music - Roof
Detailed Section 1:15



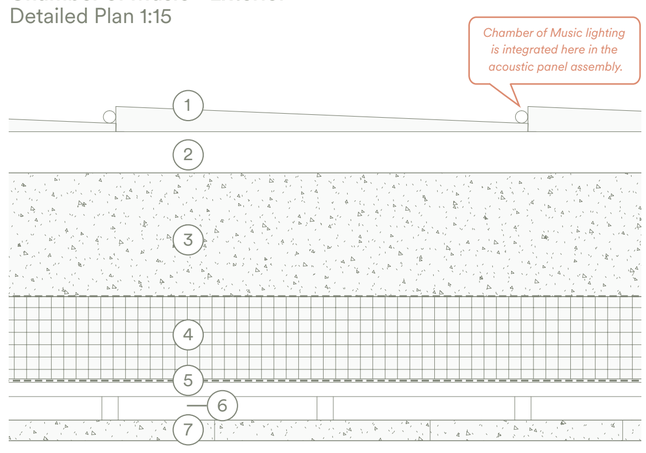
1. 50mm low-carbon precast concrete roof panels sloped (1–2%)
2. 100mm ventilated cavity with aluminium subframe + thermal breaks
3. fully bonded waterproof roofing membrane
4. 200mm recycled cork insulation (continuous, above slab)
5. vapour control layer (fully sealed, airtight)
6. 150mm low carbon concrete slab
7. steel auditorium trusses

Chamber of Music - Balcony Floor
Detailed Section 1:15



1. 20mm reused timber flooring
2. 54mm high-density acoustic floor board (3 layers)
3. 12mm impact sound isolation mat
4. 65mm clt structural deck
5. 15mm søuld eelgrass acoustic mat
6. 25mm mogu acoustic ceiling panel

Chamber of Music - Exterior
Detailed Plan 1:15



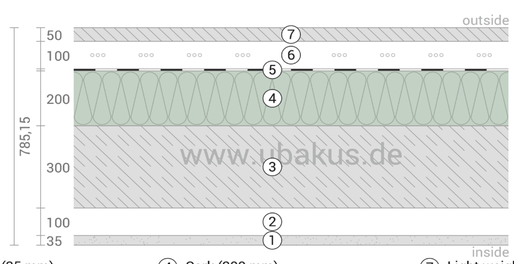
1. tilted mogu mycelium acoustic panels
2. 10cm service cavity with secondary support framing for acoustic panels
3. 30cm structural low carbon concrete wall
4. vapour control layer (fully sealed, airtight)
5. 20cm recycled cork insulation
6. vapor-permeable wind barrier membrane
7. 10cm ventilated rainscreen cavity with secondary support framing
8. 5cm low carbon precast facade panels

Thermal Transmittance: Chamber of Music Wall Corridor

Thermal protection
U = 0,22 W/(m²K)
GEG 2020/24 Bestand*: U<0,24 W/(m²K)
excellent — insufficient

Moisture proofing
No condensate
excellent — insufficient

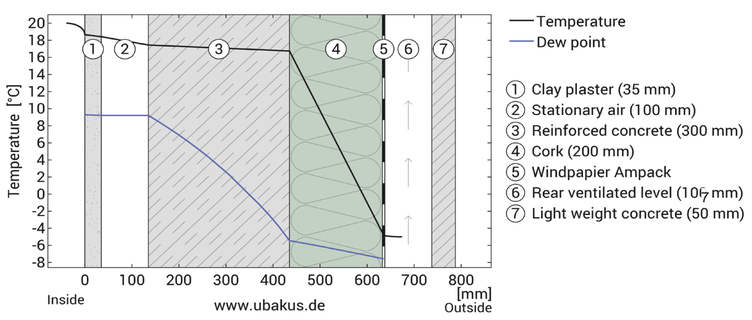
Heat protection
Temperature amplitude damping: >100
phase shift: non relevant
Thermal capacity inside: 622 kJ/m²K
excellent — insufficient



1. Clay plaster (35 mm)
2. Stationary air (100 mm)
3. Reinforced concrete (300 mm)
4. Cork (200 mm)
5. Windpapier Ampack
6. Rear ventilated level (100 mm)
7. Light weight concrete (50 mm)

The analysis shows that the temperature line never crosses the dew point line, meaning no condensation forms inside the wall, as the external cork insulation keeps the concrete warm and shifts moisture risk toward the ventilated outer layer.

TEMPERATURE PROFILE



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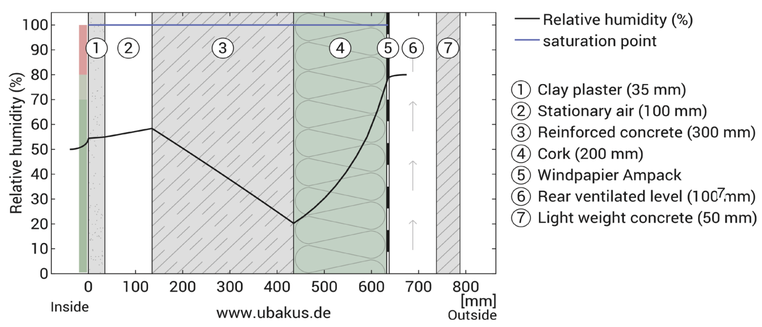
7. Light weight concrete (50 mm)

The humidity profile shows that relative humidity remains below the saturation point throughout the wall section, confirming that no moisture accumulation or condensation occurs within the assembly.

HUMIDITY



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