



ARCH 301 – ARCHITECTURAL DESIGN STUDIO IV – 2025 FALL

OSLO OPERAHOUSE / SNØHETTA

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12295131**

PROJECT & OFFICE ID



Project Name: The Oslo Opera House.

Architect: Snøhetta.

Design Approach: An approach that merges Norwegian culture, art, and nature with urban life. The most fundamental principle is transforming the building's roof and surroundings into a public, accessible landscape (The Iceberg concept).

Completion Year: 2008.

Budget: Approximately 4.4 billion Norwegian Kroner (€500-600 million, variable by opening year).

Total Built Area: Approximately 38,500 m².

URBAN CONTEXT URBAN LEVEL MAP



City / District Level - Urban Level

Location: Situated on the waterfront of Oslo Harbor, in the Bjørvika District. It is the cornerstone of the urban regeneration of this previously industrial and transportation-focused area.

Center-Periphery Relations: The building acts more like an urban landscape extending directly into the water, rather than a traditional monument. It bridges the connection between the city center and the fjords.

Transportation links: Highly accessible, located very close to central train and bus terminals.

A
N

Nesoddtangen

6 km

URBAN CONTEXT SITE PLAN & STREET SECTIONS



PROJECT VISION

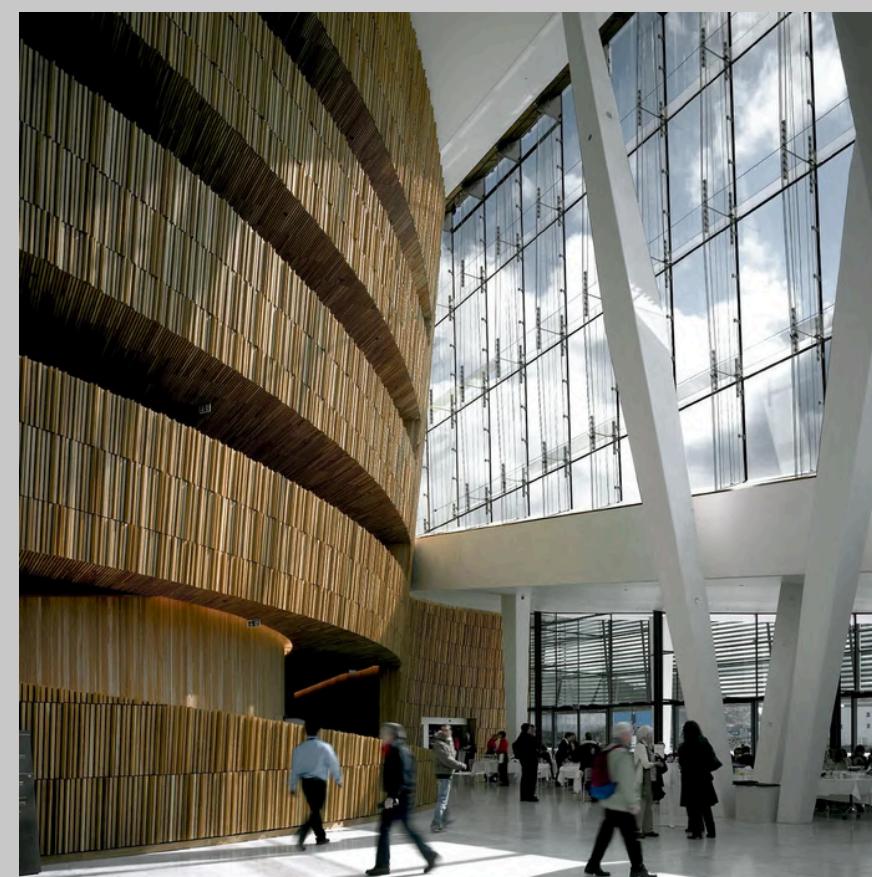
Project Goals / Motto: "Opening up the performing arts to the public." Creating accessibility and transparency by making the building a natural part of the city's social fabric.

Architectural Program: Built around two main auditoriums;

Main Hall: 1364 seats, focusing on excellent acoustics, similar to a traditional horseshoe plan.

Second Stage: 400 seats, for flexible and experimental performances.

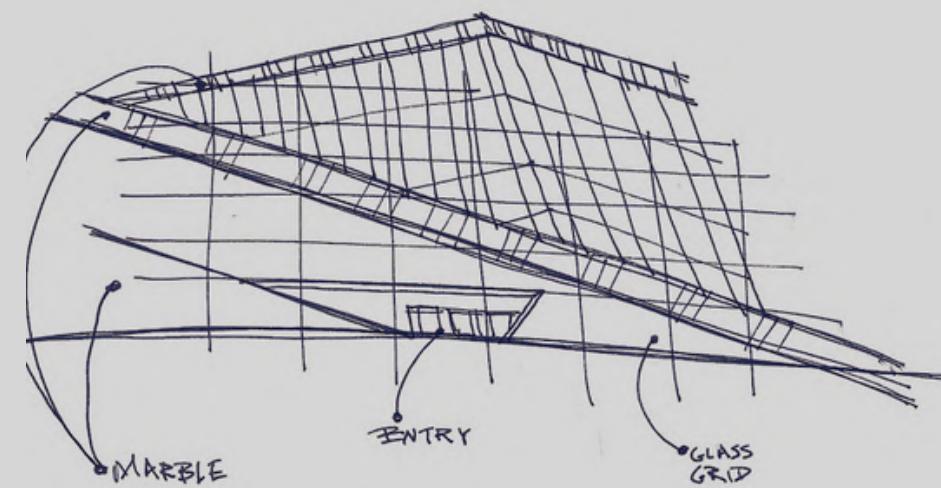
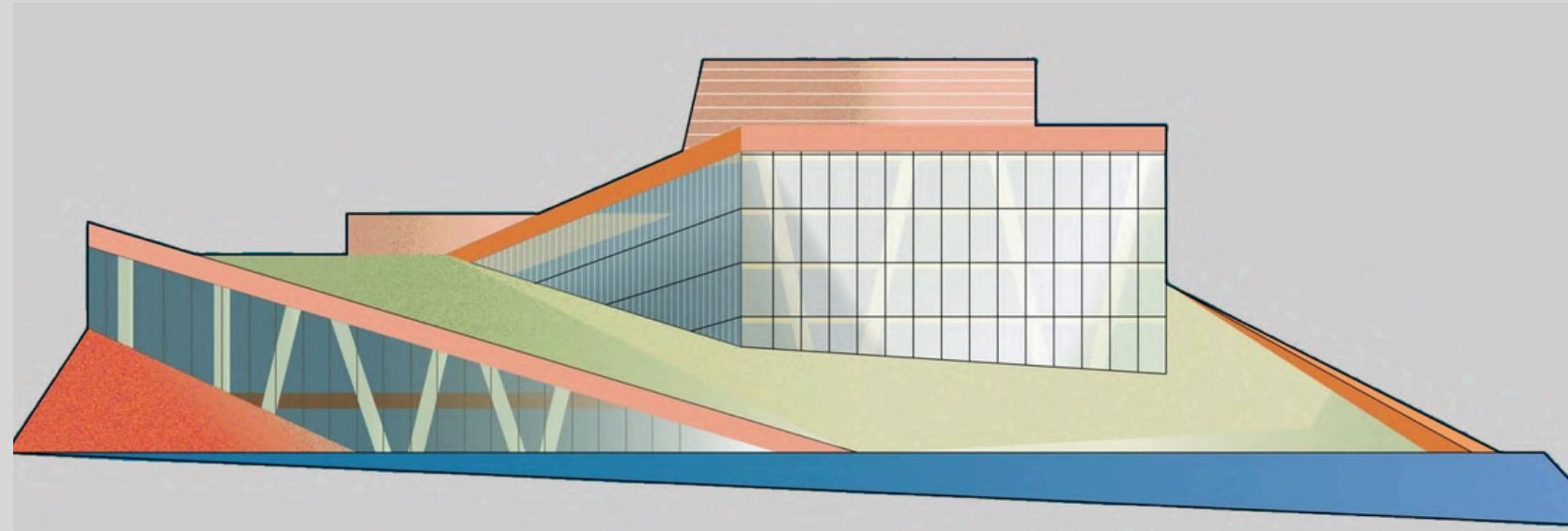
Typological Info: The ramp angle for visitors climbing the roof and the non-slip quality of the marble surface used are part of the design standards.



Contextual Vocabulary (Keywords): The Iceberg, Public Ramp, Urban Landscape, The Wooden Wall/Wave, Transparency.

ARCHITECTURAL QUALITIES

Building Morphology



This diagram shows how the Opera House acts as an extension of the city's movement system.

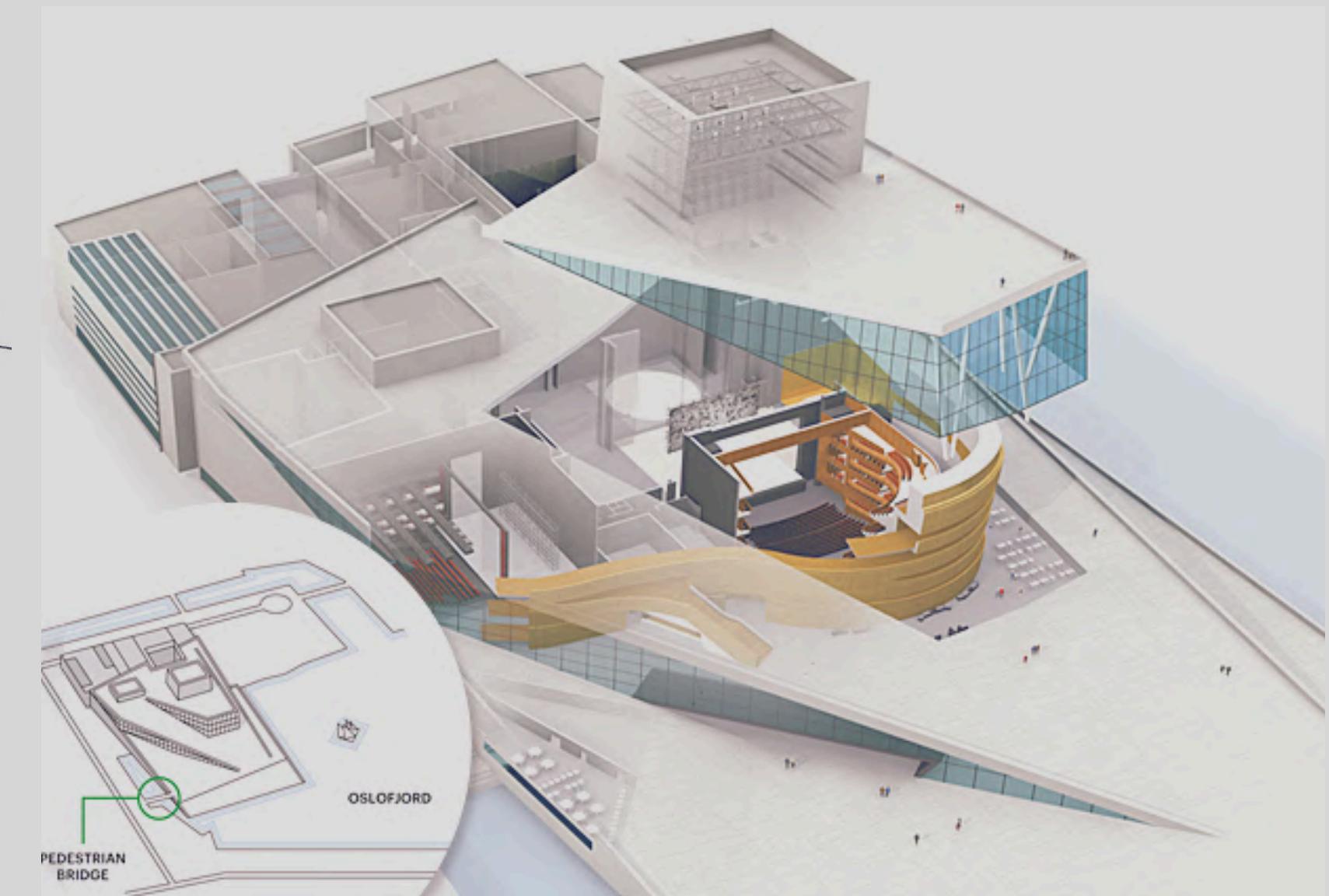
Pedestrian circulation from the city level continues up to the roofscape, symbolizing openness and civic engagement.

The building's orientation directs views toward the fjord and the skyline of Oslo, emphasizing the meeting of land and sea.

Building Morphology / Geometry

Form: The overall form mimics an iceberg melting into the fjord. The marble surfaces ascending from the water to the land consist of geometric, angled, and sloping planes.

Material Contrast: Sharp contrast between the cold, hard, and public white marble (roof/square) on the exterior and the warm, organic, and artistic wooden (oak) façade and auditorium masses on the interior.



ARCHITECTURAL QUALITIES

Circulation Diagram and Building Core



Public Circulation: The most striking circulation element is the Public Ramp. This is a continuous horizontal and inclined circulation loop leading to the building's roof.

Internal Circulation (Foyer): The main entrance opens into the enormous foyer area behind the transparent glass façade. This foyer is surrounded by the main volume of the Opera, the "Wooden Wave" wall. The glass façade allows the interior foyer and the wooden auditorium masses to be legible from the outside (transparency).

Core: The core houses the fly tower, technical areas, and vertical circulation.

ARCHITECTURAL QUALITIES



The main auditorium is placed slightly off-axis, breaking traditional symmetry. Its organic plan (horseshoe shape) ensures excellent sightlines and optimal acoustics for every seat.

The oak cladding defines it as a warm sculptural volume—the “heart” of the building—visible from every level of the foyer.



ARCHITECTURAL QUALITIES

Circulation Diagram and Building Core



Tectonic Architecture and Materiality

Exterior Surface: Light and white Carrara Marble from Italy is used. This marble extends from the ground to the roof, giving a sense of an urban landscape.

Interior Surface/Acoustics: The interior façade of the main auditoriums and the foyer area are clad with detailed oak wood panels (The Wooden Wall), creating a warm atmosphere. This also serves the acoustic quality of the halls.



Primary Materials:

Carrara marble – used for the roof and exterior surfaces; reflects light and defines the monolithic appearance.

White granite – forms the base and connects the building to the ground.

Oak wood – covers the auditorium interior, creating warmth and acoustic comfort.

Glass façade – ensures transparency and invites the city inside.

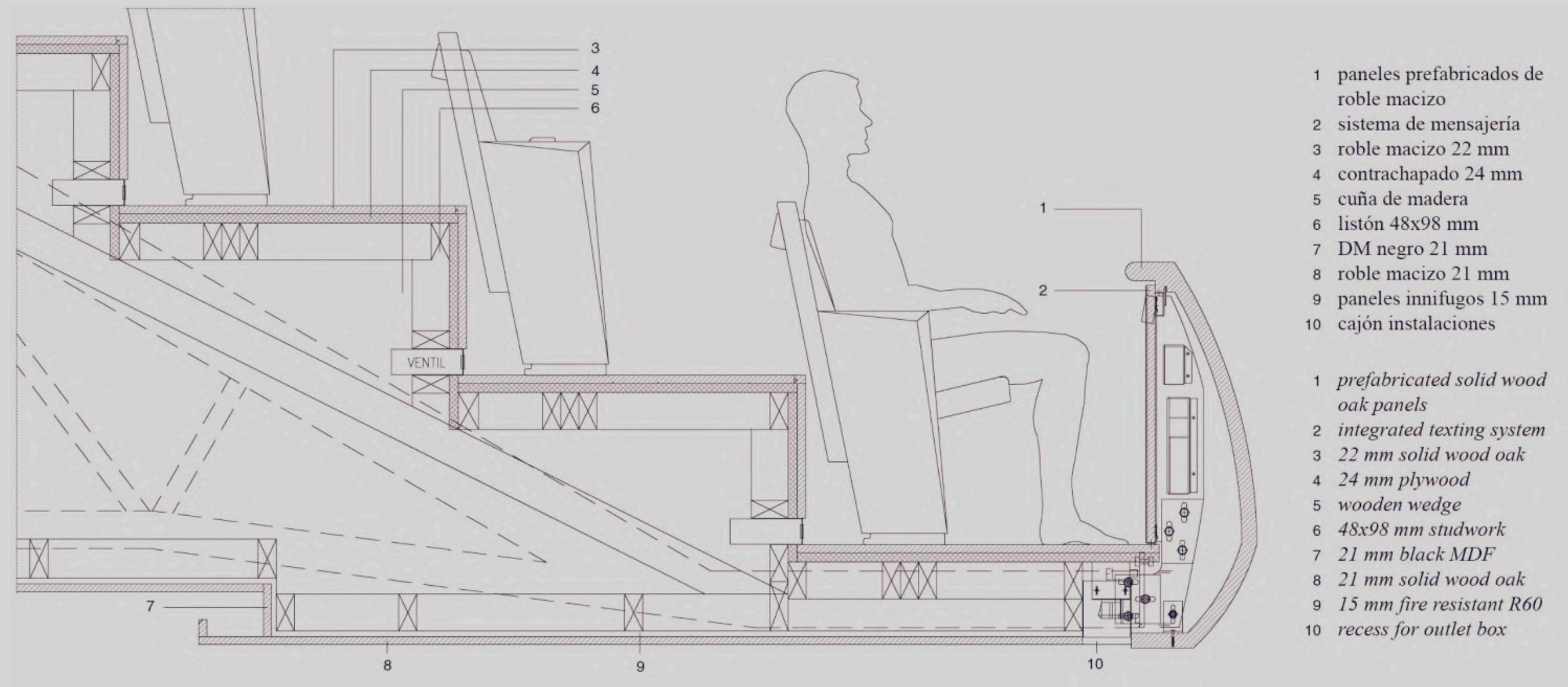
Material Concept:

The contrast between solid (stone) and transparent (glass) materials represents the dialogue between nature and culture—the heavy landscape-like exterior and the delicate, glowing interior.



ARCHITECTURAL QUALITIES

Auditorium Seating Section Detail



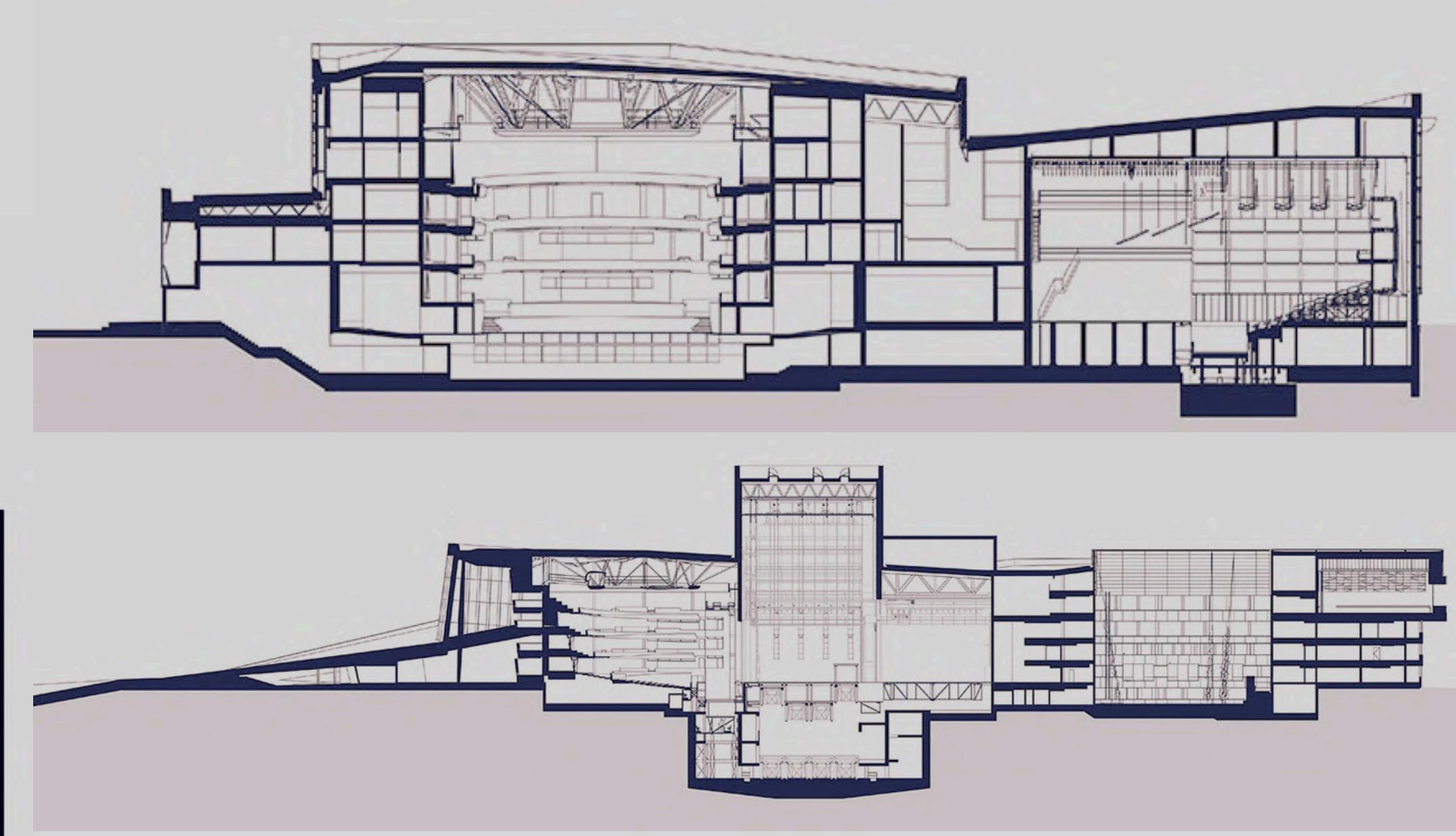
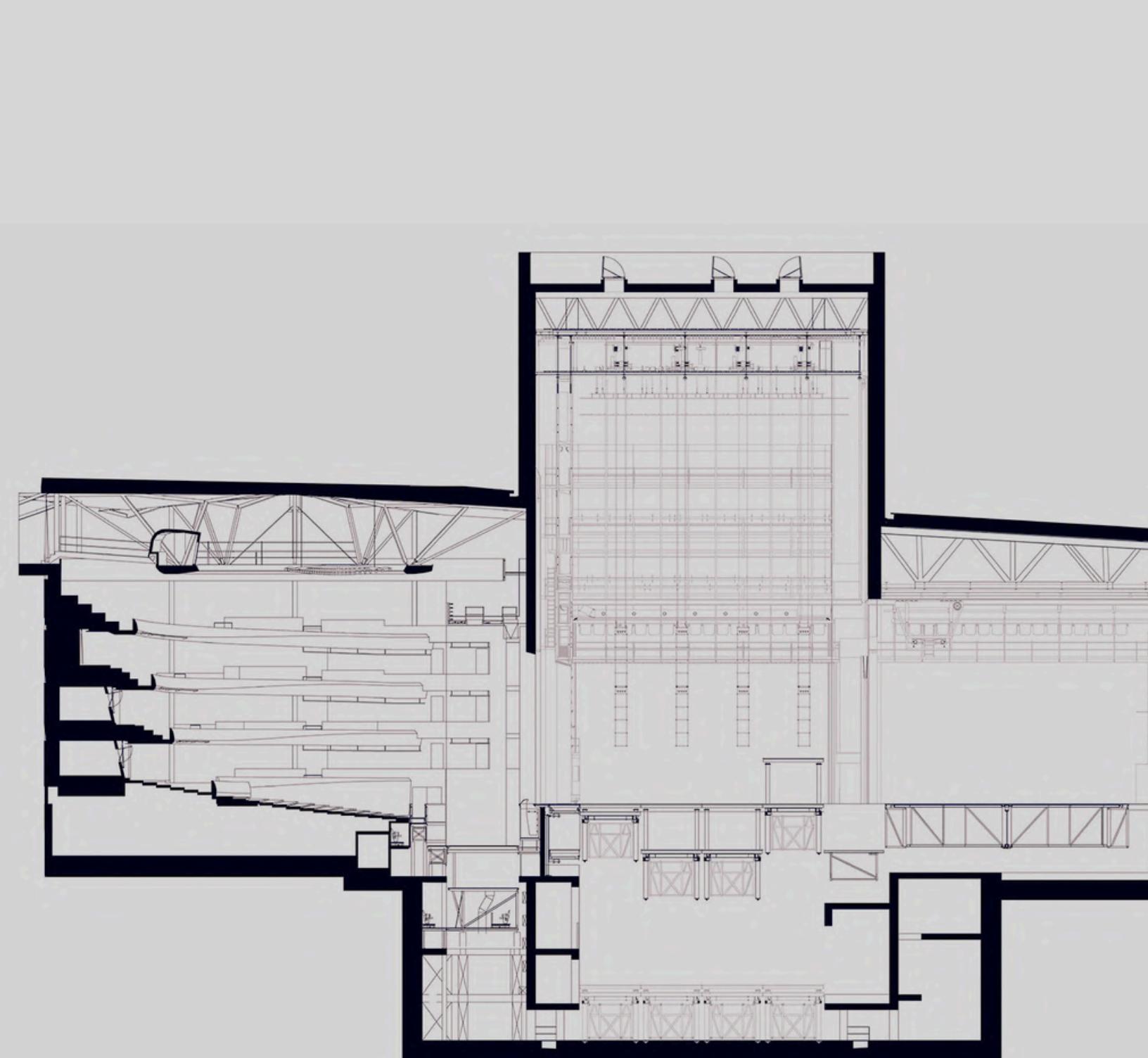
This layered construction achieves both acoustic clarity and audience comfort, maintaining a reverberation time (RT60) of approximately 1.2–1.4 seconds — ideal for opera performances.

The human figure illustrates the ergonomic optimization: knee clearance, seat inclination, and armrest height are precisely aligned for long-duration seating comfort.

This section detail illustrates the acoustic and ergonomic design of the Oslo Opera House's main auditorium seating. The stepped layout follows optimized sightlines with a slope of about 10–12°, ensuring clear visibility from every seat. The structural system is composed of steel framing supporting a layered wooden platform: Prefabricated solid oak panels provide warmth and natural acoustic absorption. Beneath them, MDF sheets, insulation layers, and service cavities help control resonance and vibration. Seating is anchored with steel connections to reduce structural noise and movement.

ARCHITECTURAL QUALITIES

Plans & Sections



The section emphasizes the roof's slope, inviting movement upward from the city level.

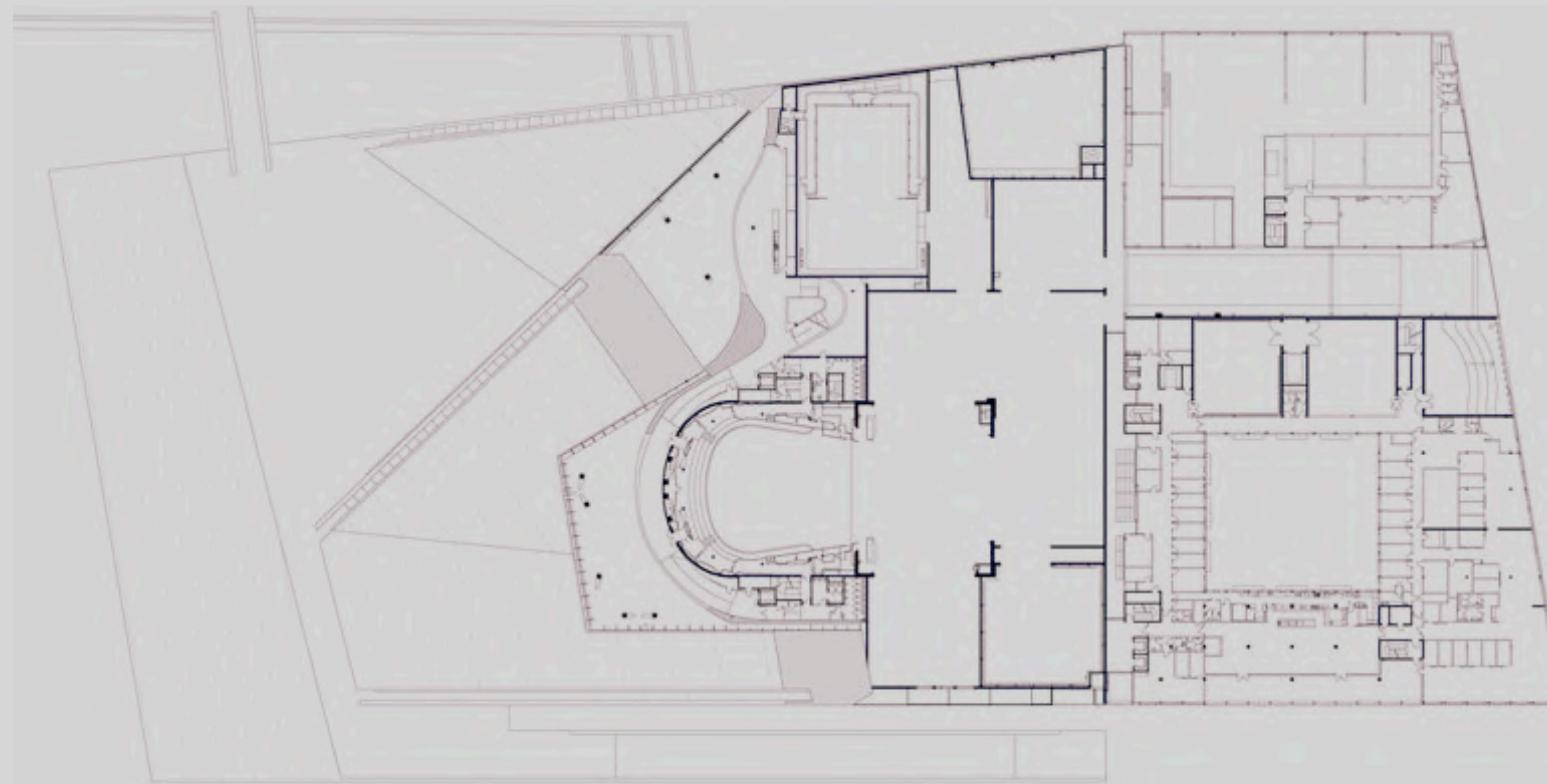
Natural light penetrates deep into the foyer via large glazed panels.

The contrast between heavy and light materials (stone vs. glass) highlights the spatial hierarchy.

Backstage spaces are semi-buried, optimizing acoustic isolation and spatial zoning.

ARCHITECTURAL QUALITIES

Plans & Sections



PLAN 3 MÄLESTÖKK 1 : 1000 /A4

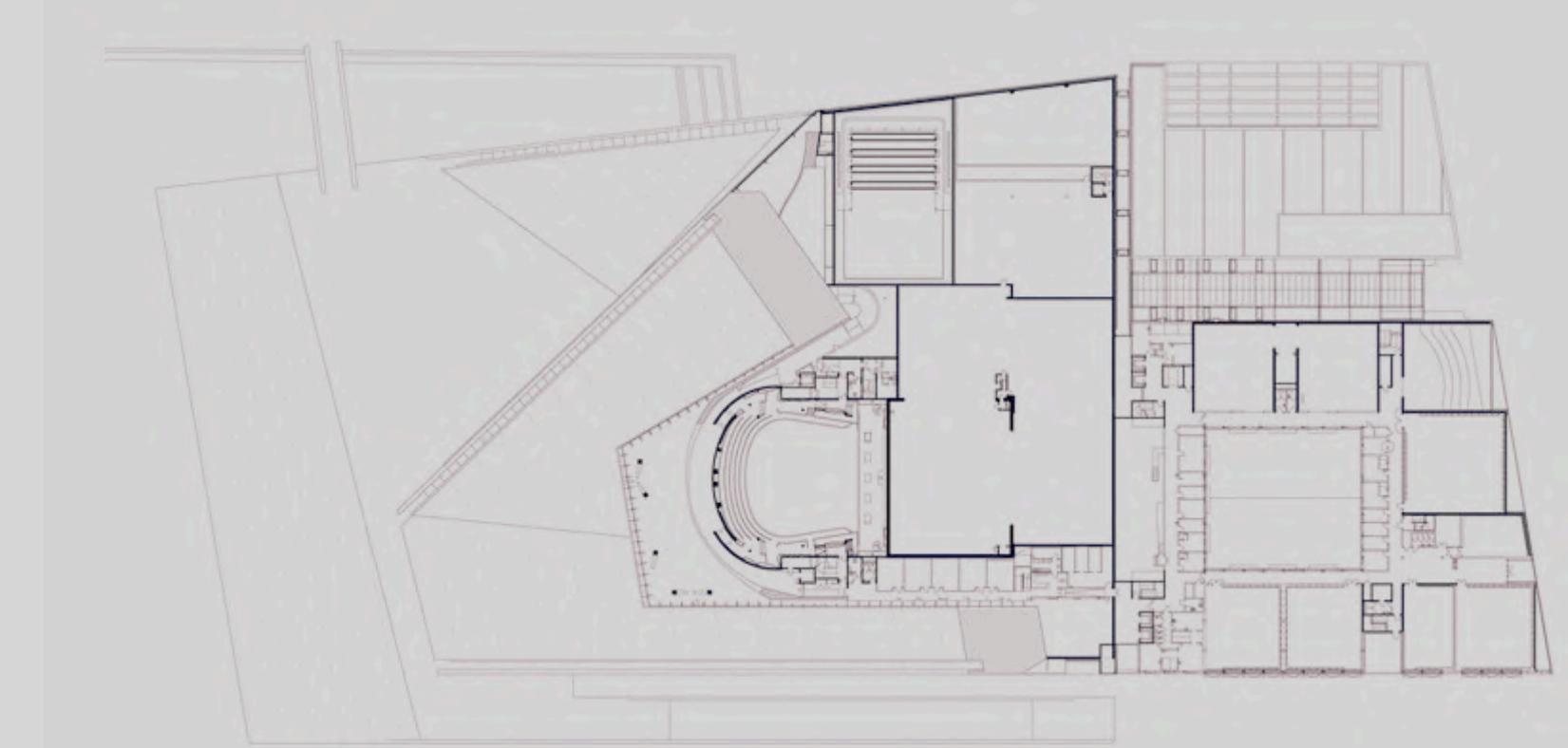
Public zones (foyer, entrance plaza, roof access) occupy the front and upper parts of the plan.

The main entrance connects directly to the harbor promenade, symbolically extending the public realm into the building.

Diagonal ramps and wide circulation axes make the interior flow continuous—visitors can move freely without barriers.

The building plan is designed as an extension of the city, where public circulation gradually transforms into performance spaces.

The geometry is derived from the idea of a glacier sliding into the fjord, creating both linear and diagonal movement lines that invite people from all directions.



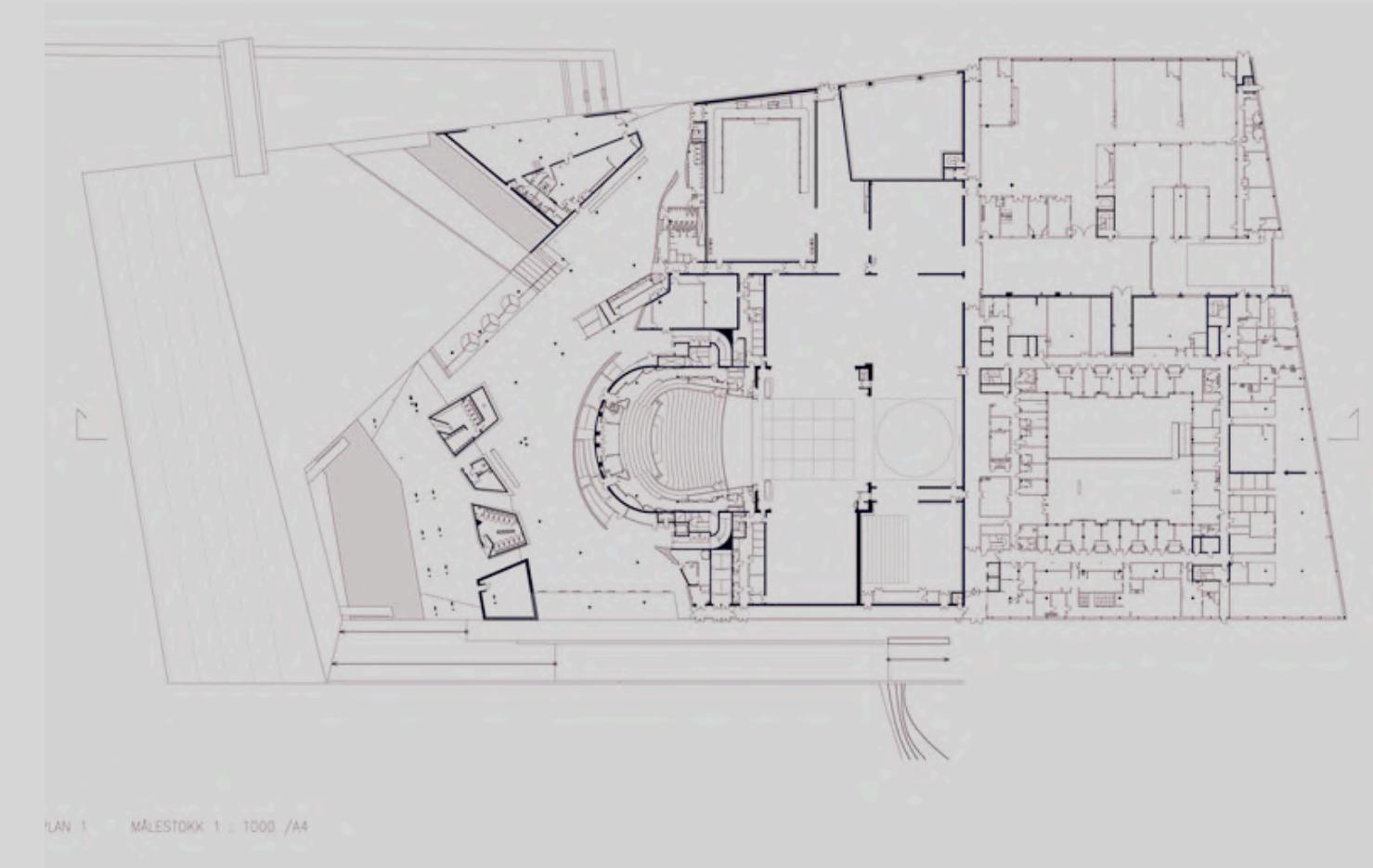
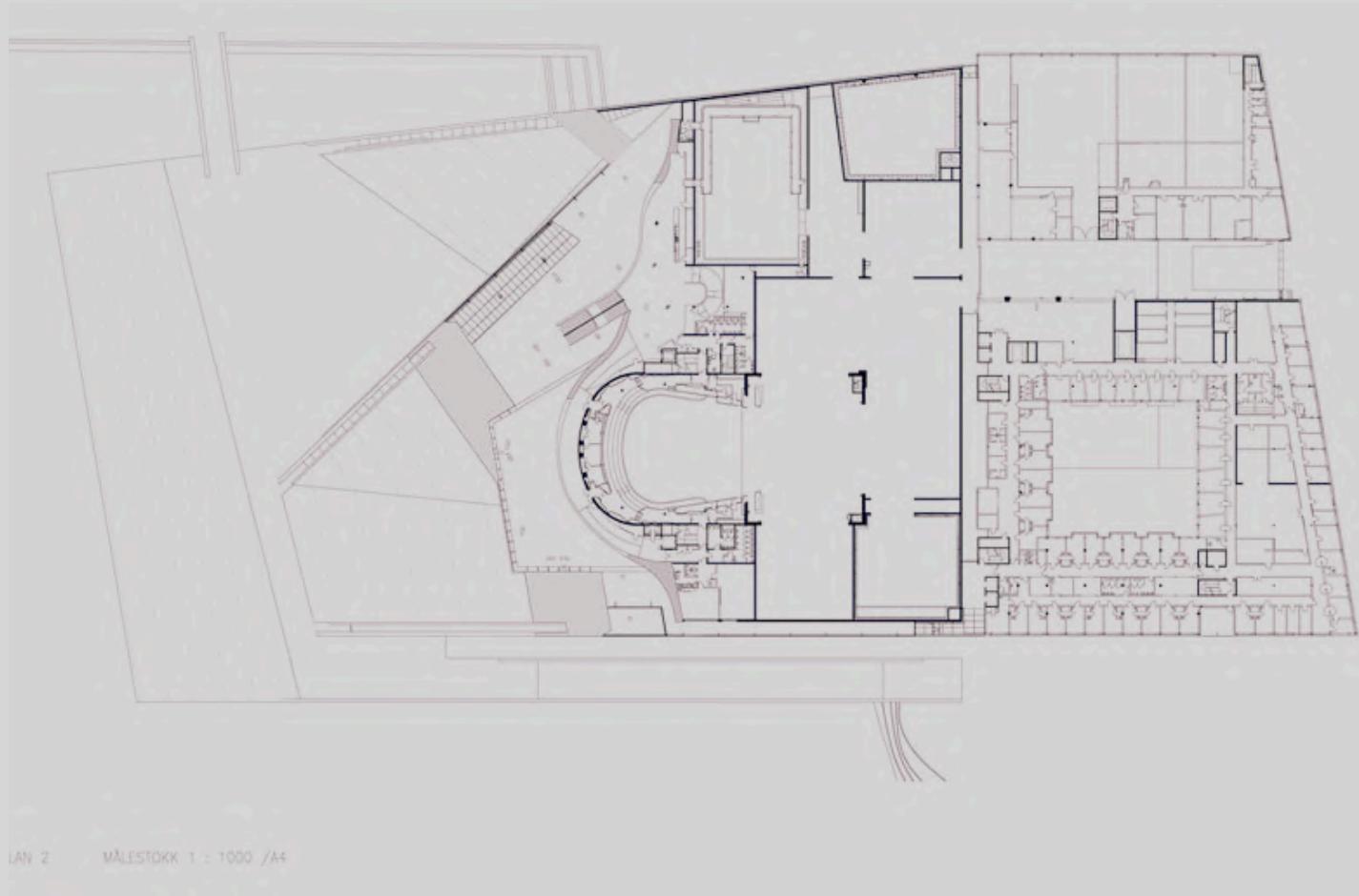
PLAN 4 MÄLESTÖKK 1 : 1000 /A4

ARCHITECTURAL QUALITIES

Plans & Sections

The plan is divided into three main layers:

- Public Zone (Front): Main foyer, ticket office, restaurant, exhibition and gathering spaces.
- Performance Core (Center): Main auditorium, rehearsal rooms, orchestra pit, and stage zones.
- Production & Technical Zone (Back): Workshops, dressing rooms, loading docks, and service corridors.



The foyer acts as a spatial buffer between the city and the stage. Its open plan allows flexible use for exhibitions, intermissions, and informal gatherings. Large glass façades dissolve visual boundaries, making the interior part of the city's landscape.

ARCHITECTURAL QUALITIES

Environmental Conditions / Relations



Orientation / Lighting: The large, transparent glass façade floods the foyer area with natural light, even during the low-sun days of Northern Europe.

Climate / Wind: The iceberg form directs coastal winds, while the marble surface of the roof is specially treated for durability and anti-slip properties in cold climates.

CONCLUSION

The Oslo Opera House stands as a turning point in architectural thinking—transforming the traditional idea of an opera house from a closed, monumental object into a living, interactive urban space. Its greatest achievement lies in merging the architectural program (the performance spaces within) and the urban program (the public plaza and accessible roof) into a seamless experience. By inviting people to walk, gather, and engage with the building beyond its primary function, it redefines how architecture can interact with the city and its citizens.

In my opinion, this project is not only about form or aesthetics, but about rethinking accessibility, openness, and social interaction in public architecture. It challenges the conventional hierarchy between the audience and the city, turning cultural architecture into an everyday experience. This idea strongly influences my own architectural approach—creating spaces that are not isolated icons, but living, participatory environments that invite people to become part of the design itself.



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