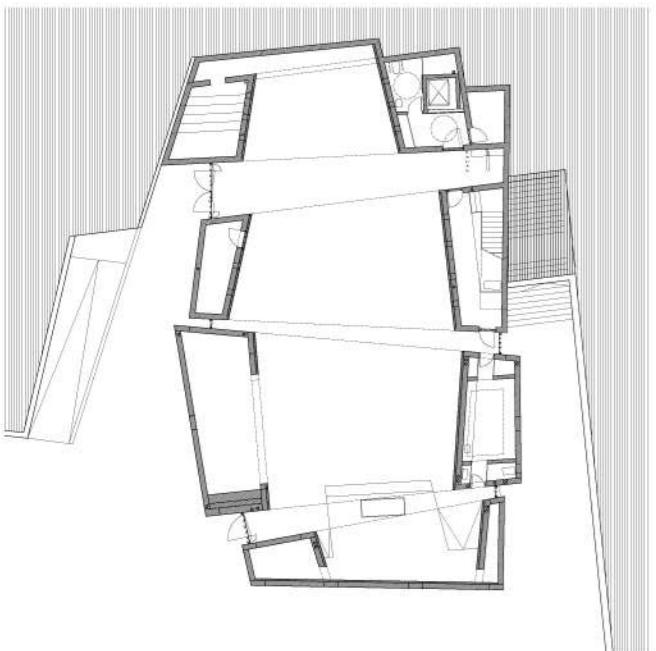
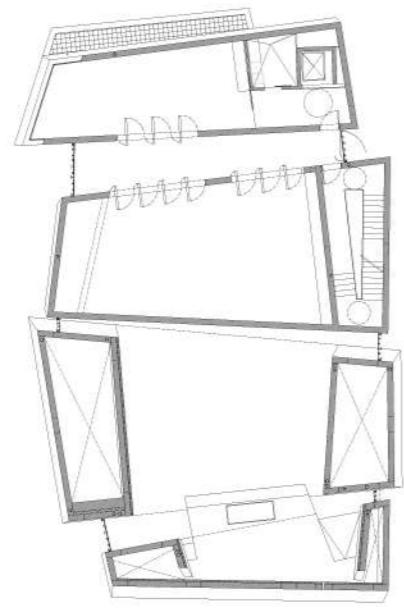




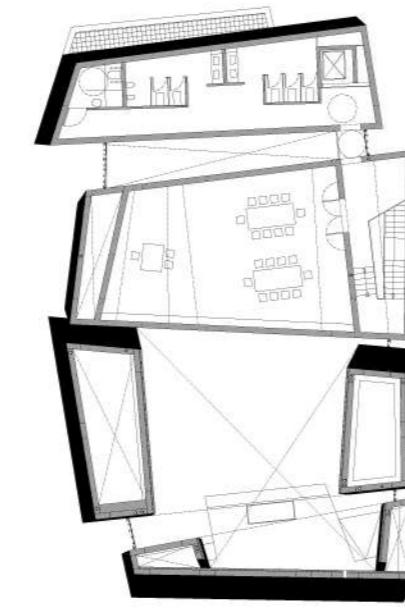
Ground floor plan, the church



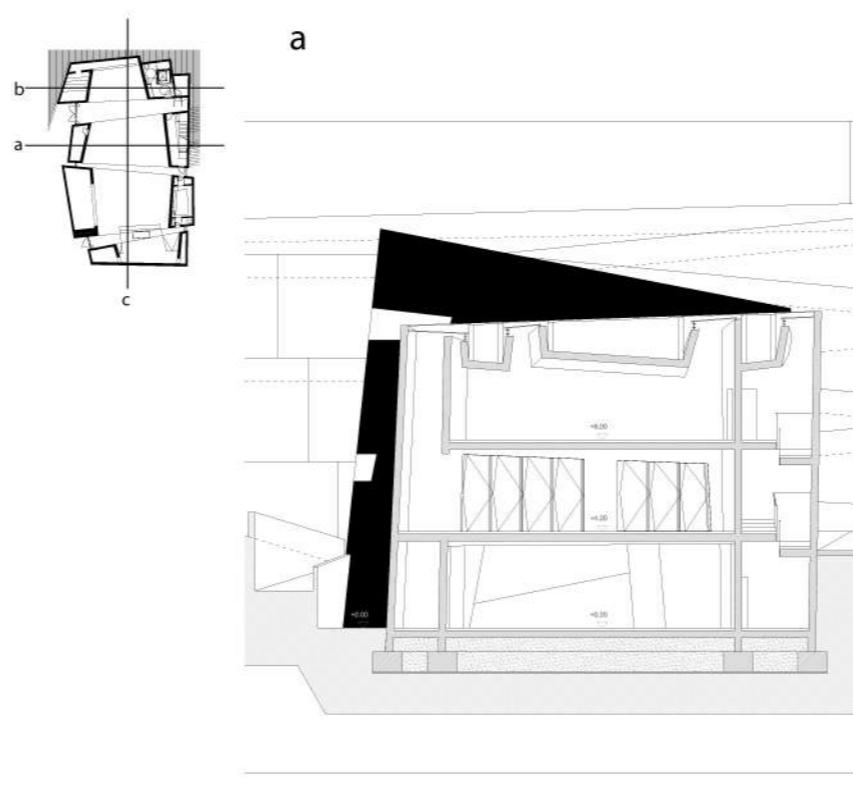
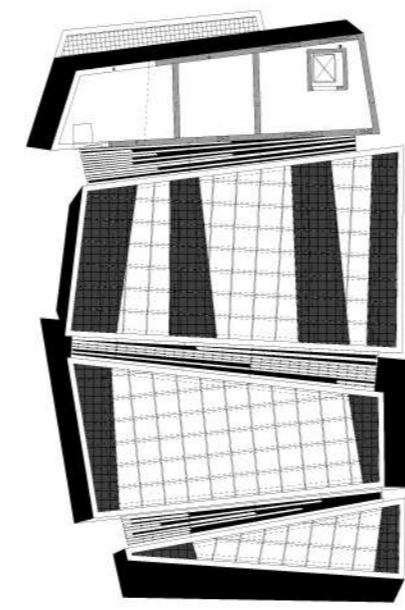
First floor plan, the parish



Second floor plan, the parish



Roof plan and bell tower



## The Holy Redeemer Church of Las Chumberas Tenerife island, Spain

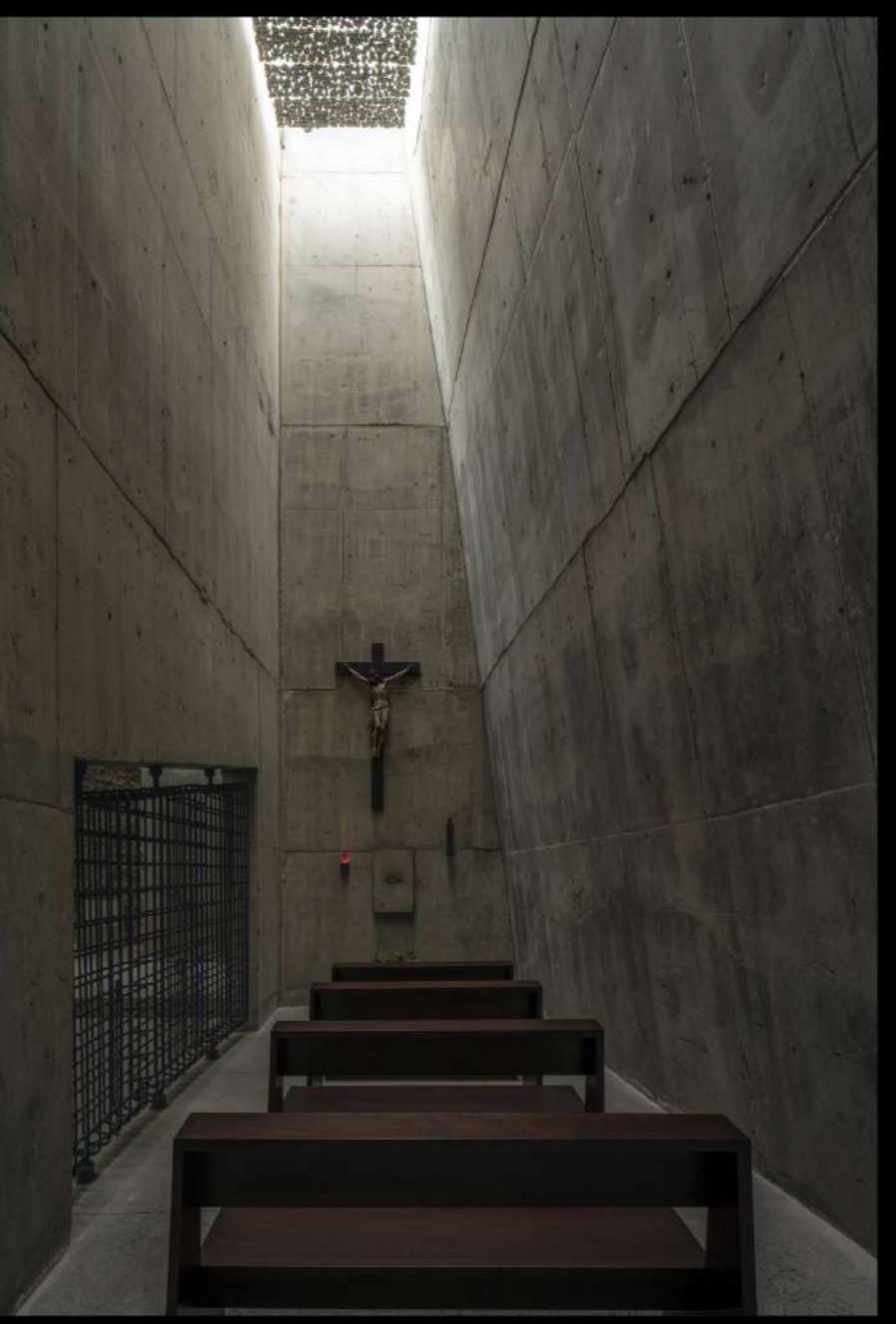
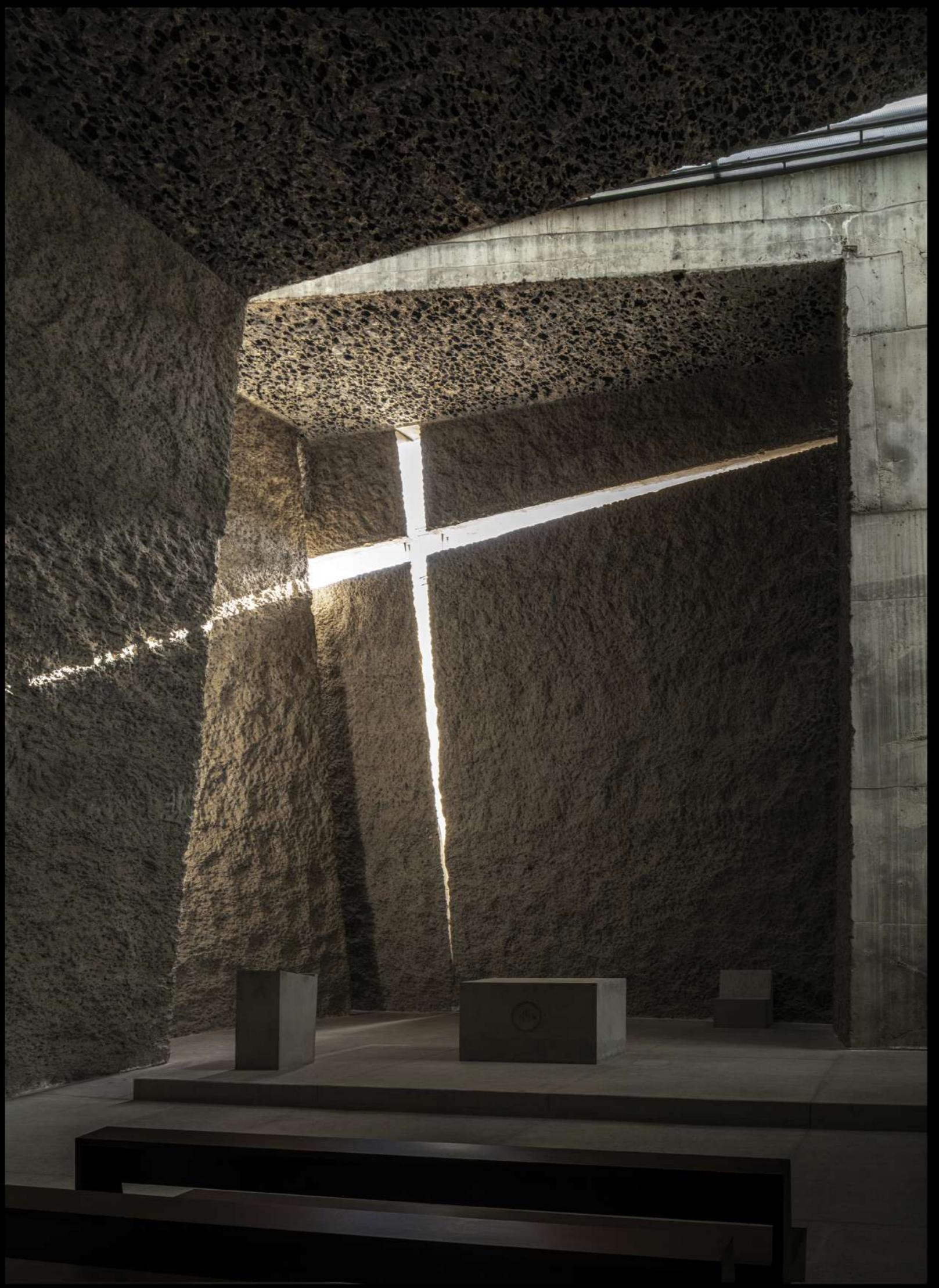
This church catalyzes urban renewal in its neglected outskirts neighborhood, rising as a landmark in a fragmented built landscape. The site includes a church, community center, and a public square, providing a vital gathering space for the locals.

Funded through donations, the irregular flow of contributions determined its design with four independent volumes built in phases, the first two—housing the center—were completed within two years and have been operational since, while the remaining structures were finished 16 years later as funding allowed.

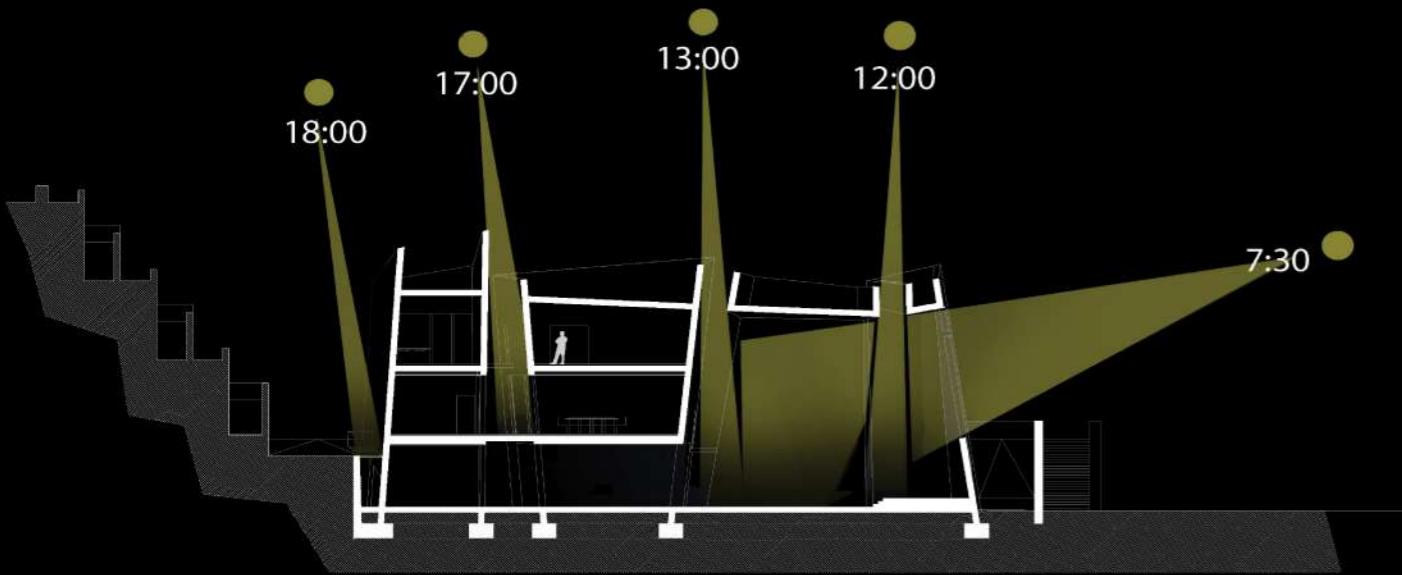
Inspired by the volcanic landscape, it features massive, rough forms, contrasting with the built surroundings. Narrow cracks between structures, filled with sculptural metal and glass, filter daylight to create a minimalist, spiritual interior.

Concrete, chosen for versatility, serves structure, form, texture, and acoustics. Locally produced, inexpensive, durable, and energy-efficient, the thick walls enhance its thermal inertia. Innovatively used for acoustics, chipped concrete mixed with volcanic stones absorbs sound and, alongside smooth or rough exposed concrete, achieves a sophisticated sound control, comparable to an opera house—ideal for spoken word and song.





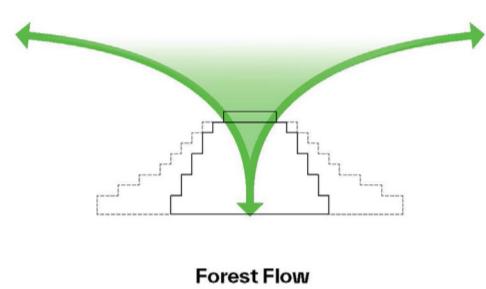
Daylight is a key architectural element, shaping an introverted, austere space that invites reflection. Without windows, the building is illuminated by the unglazed cross and zenithal light. Throughout the day, the shifting light highlights different areas, guiding users through their interior exploration.



# GELEPHU INTERNATIONAL AIRPORT

Gelephu, Bhutan

Blending Bhutan's traditional craftsmanship with modern innovation, the Gelephu International Airport is strategically positioned near the Bhutan-Indian border and the Paitha River, surrounded by Bhutan's lush subtropical forests, mountains, and rivers. Set against a backdrop of the Himalayas, the airport's diagrid structure is crafted from locally and sustainably sourced timber and adorned with traditional Bhutanese wood carvings by local artists. The painted façade draws inspiration from the 'Kachen,' a wooden pillar revered for its structural significance and intricate design, embodying Bhutanese architectural heritage and spiritual symbolism.



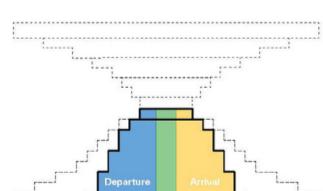
## FOREST FLOW

Known for its lush forests and breathtaking landscapes, the concept brings the forest experience into the airport, showcasing Bhutan's natural beauty to all passengers.



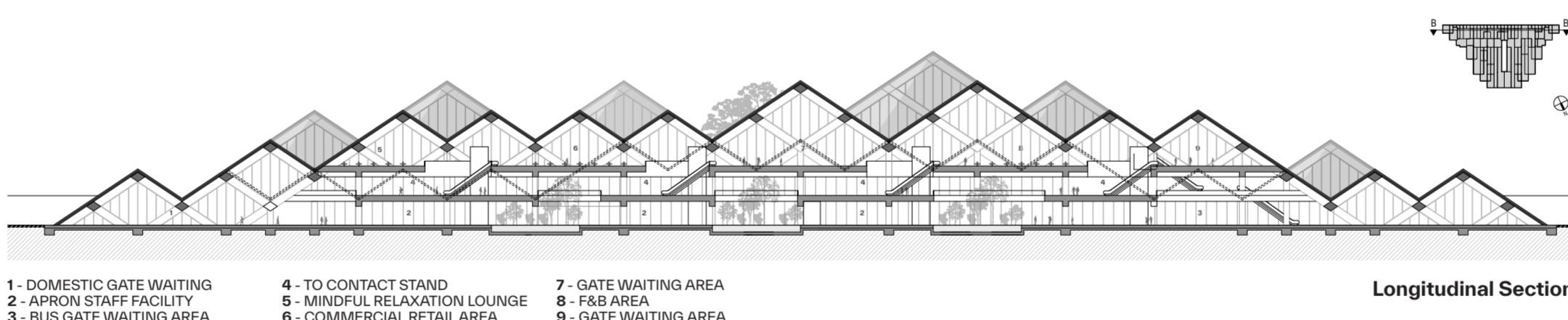
## FOREST TERMINAL

Drawing inspiration from the different types of forests in Bhutan, the design seeks to showcase each forest layer in the surrounding landscape, seamlessly bringing them into the building to form a central Forest Spine.



## ARRIVAL & DEPARTURE

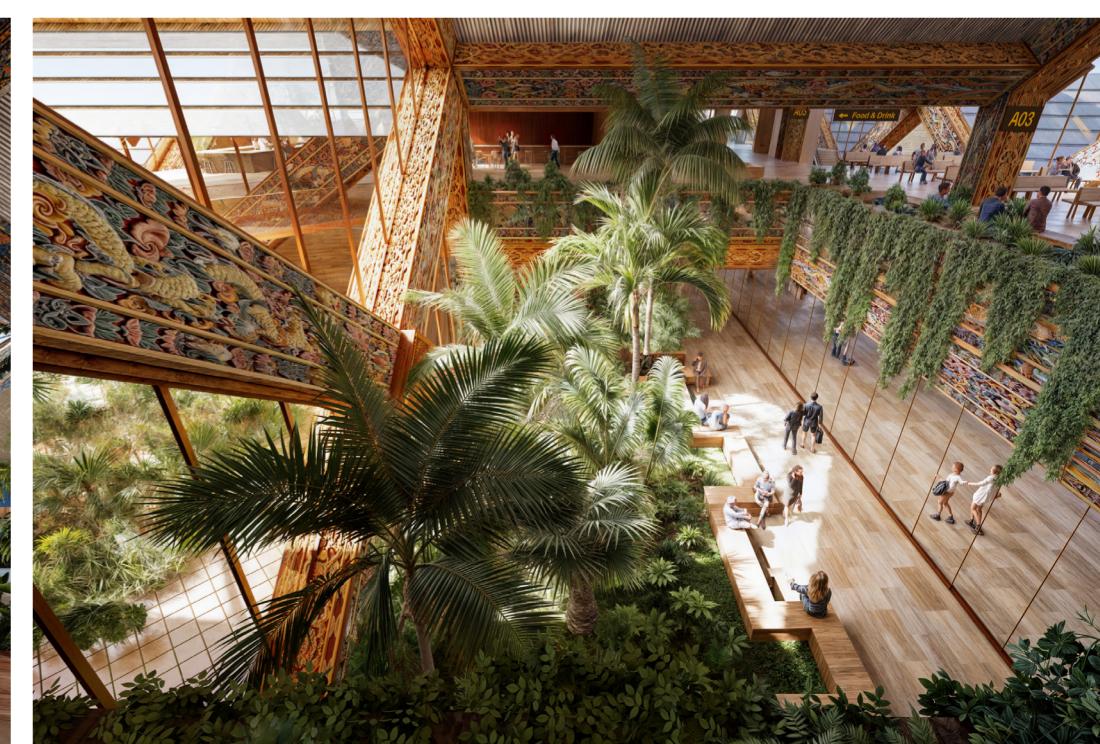
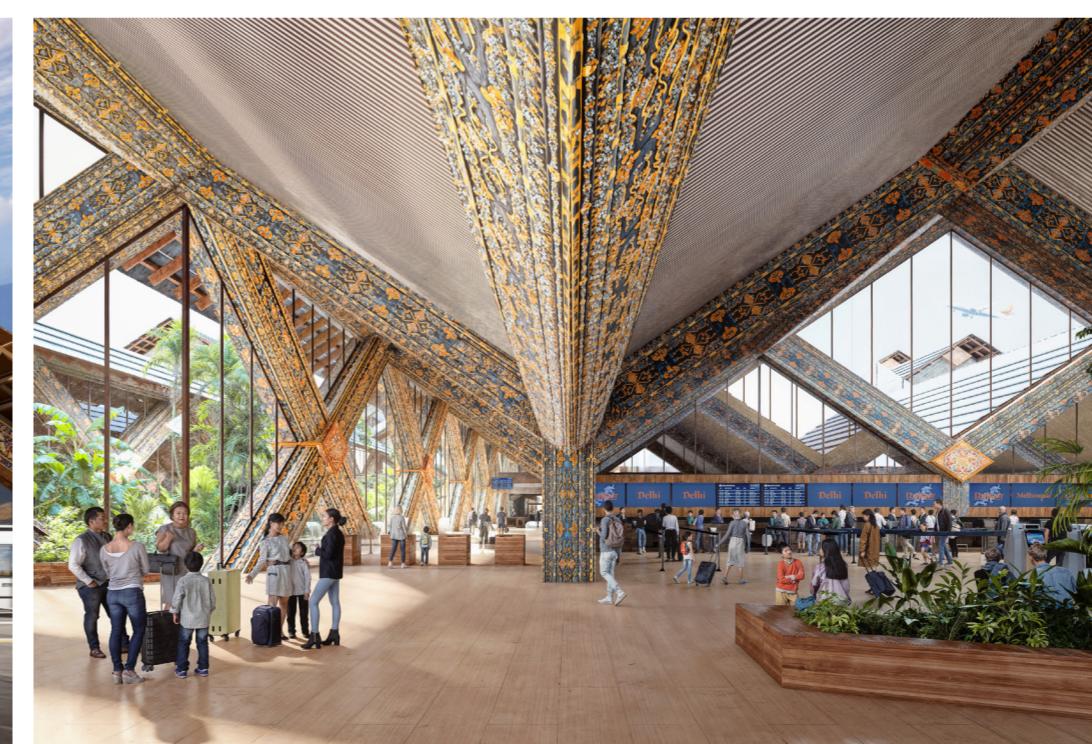
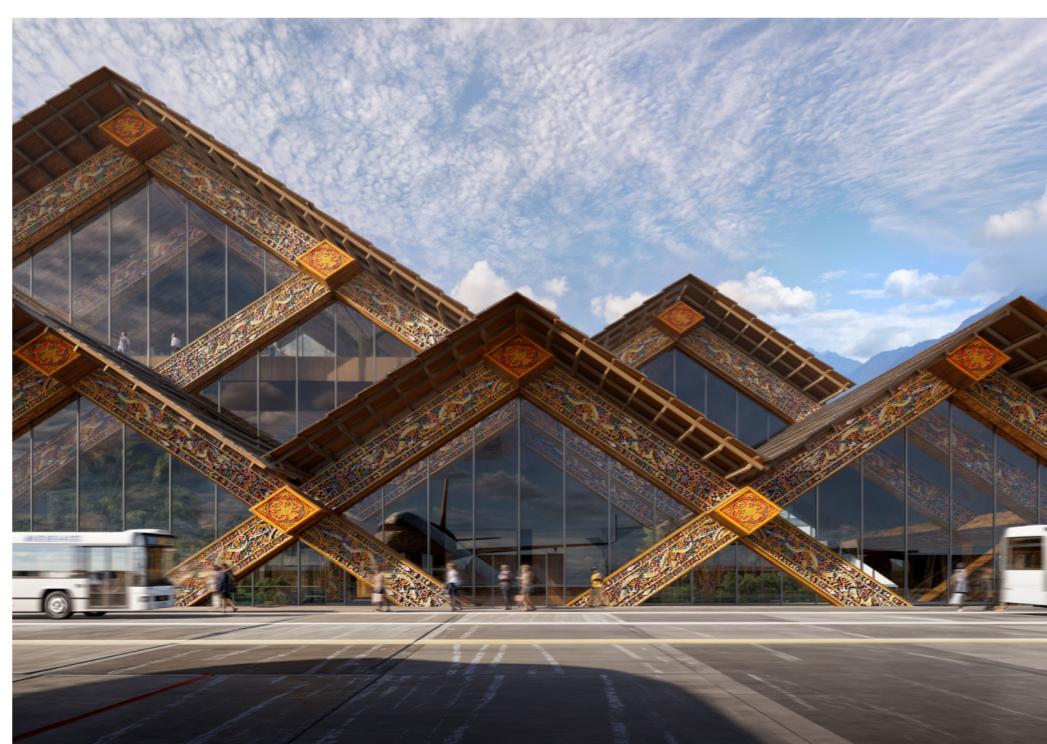
The Forest Spine programmatically divides the terminal building into two sections, creating a natural flow for arrivals and departures and influencing the functional layout of the terminal.

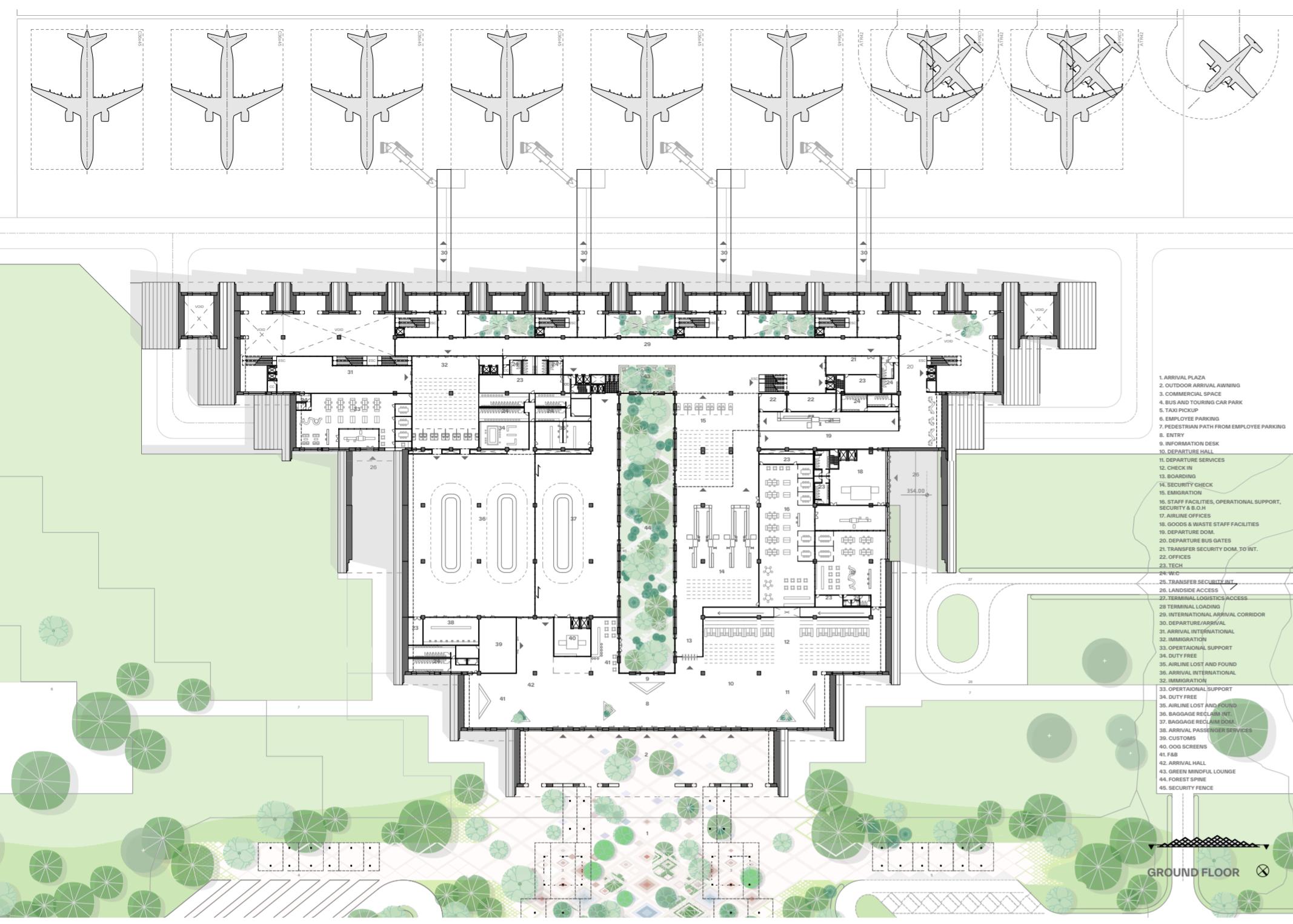


Longitudinal Section

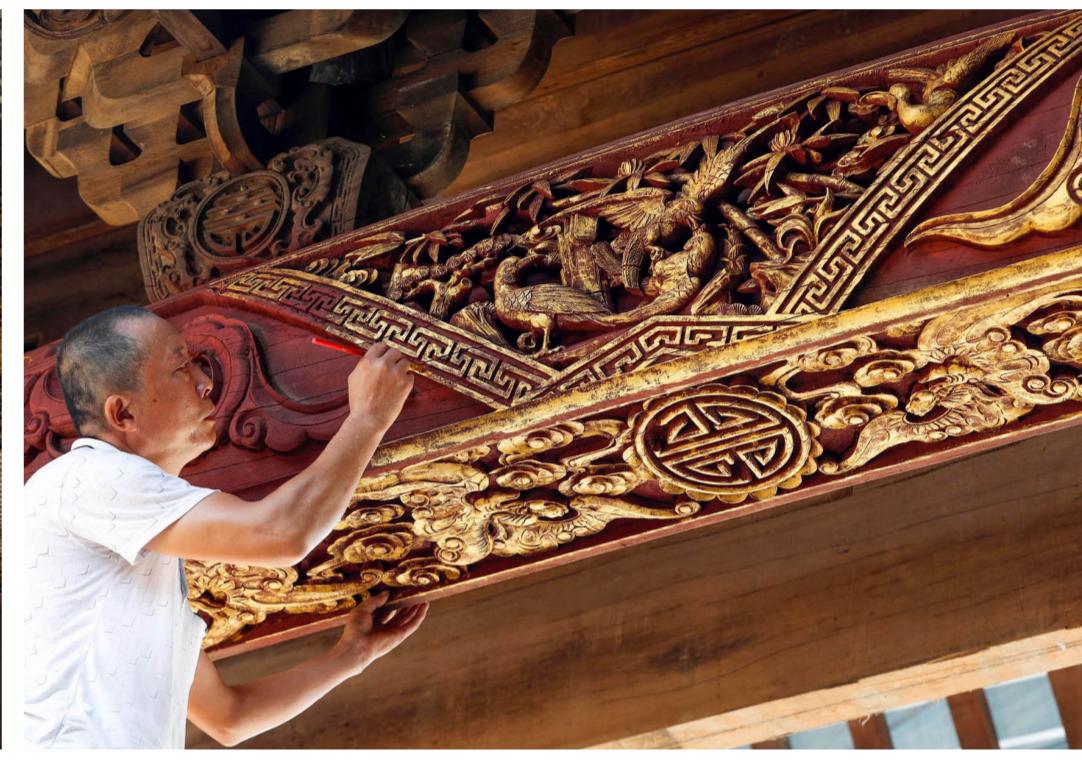


Site Plan

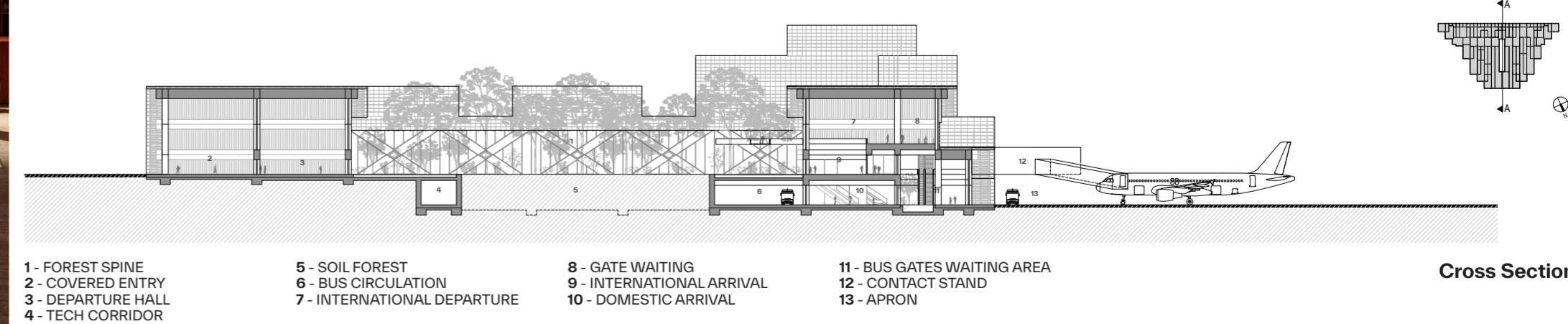




The project will be featured at the 2025 Venice Architecture Biennale, where an exhibition will showcase a timber diamond piece reflecting the airport's façade. The installation, sculpted in real time by both a Bhutanese artist and a robot, emphasizes the fusion of traditional craftsmanship and technological innovation. This collaboration not only highlights the artistry of Bhutan but also showcases how advanced technology can enhance and preserve cultural heritage, setting the stage for future architectural evolution.



Gelephu International Airport integrates Bhutan's biodiversity corridors through the Forest Spine, a central courtyard with green spaces, indigenous fauna, and a treetop walkway, offering a calming connection to nature. The airport celebrates Bhutanese culture through regional craftsmanship such as Shing-Zo (carpentry), Par-Zo (carving), Lha-Zo (painting), and Tshar-Zo (weaving), with traditional carvings flowing seamlessly from exterior to interior. The terminal, filled with natural light, includes spaces for yoga, gong baths, and meditation, reflecting Bhutan's focus on well-being. Adapted to the subtropical climate, the airport uses passive strategies like wooden structures, ventilated roofs, and extended eaves for climate control. Set to become Bhutan's first in-land mobility hub, the airport also promotes sustainable transport, with accessible trackless trams and buses linking to Gelephu's revitalized town center and beyond.



Cross Section



## PUBLIC BUILDINGS

# FRACTAL CHAPEL

INTERIOR DESIGN OF PROTESTANT CHAPEL AT STATE HOSPITAL GRAZ

The FRACTAL CHAPEL, located at a state hospital in Graz and hosted by the Protestant Church, serves as a serene retreat for patients, staff, and visitors. The design is grounded in current neuroscience and environmental psychology research, integrating biophilic elements and fractal patterns to create a peaceful, emotionally resonant space. These elements work together to promote well-being, reduce stress, and foster calm in the demanding hospital environment.

Covering 35 square meters, the chapel features a double-height ceiling and a room-high glass façade. Following principles of religious scenography, the low entry area opens into an 8-meter-tall space, creating a dramatic yet calming experience. The interior combines biophilic design strategies—natural materials, daylight, and organic forms—to cultivate a warm, inviting atmosphere that encourages contemplation and tranquility in a clinical setting.

A perforated screen spirals along the walls, symbolizing the human life cycle. This screen not only contributes to the symbolic narrative of the space but also hides functional elements such as the sacristy, multimedia equipment, and building technology. The cut-out panels allow natural and artificial light to filter into the space, conveying time, motion, and stillness. Fractal patterns are central to the chapel's design. Developed through a collaboration between designers and scientists at the University of Oregon / Fractals Research, these patterns are inspired by nature's geometry and evoke positive psychological, physiological, and neurological responses. Studies show that viewing fractals can reduce stress by up to 60%. The research, which originated with NASA experiments to reduce astronauts' stress, builds on this legacy to reconnect

people with the health benefits of nature's beauty and harmony.

The fractal designs were generated using a custom computer program that combines artistic input with scientific analysis. This unique art-science tool enables the creation of patterns that are visually engaging while also promoting relaxation. Psychological experiments confirmed that these patterns achieve an ideal balance of preference, engagement, and relaxation. Published in *Frontiers in Psychology*, the research demonstrated that the chapel's fractal patterns benefit a broad range of users, supporting neurodiversity and inclusive sensory design.

The material palette of the chapel remains minimal to emphasize the interplay of pattern, form, and light. Wood is used for the ceiling, flooring, benches, and altar, contributing to the space's warm, earthy character. This choice allows the fractal patterns and natural elements to remain the focal points.

At the heart of the chapel is a unique altar created by a renowned Austrian sculptor from the inverted rootstock of a walnut tree. This piece, originating from a former cemetery now used as a playground, symbolizes transformation and interconnectedness. Surrounded by fractal surfaces and enhanced by refined lighting, the altar invites moments of introspection and contemplation.

In an environment often characterized by urgency and emotional strain, the FRACTAL CHAPEL provides a calm refuge. Uniting architecture, science, and art, it offers healing through beauty, rhythm, and light. The chapel contrasts the fast pace of hospital life with the restorative presence of nature, fostering peace, tranquility, and reflection in the midst of a demanding healthcare setting.



