

**ARCH 402
SPRING 2020**

IZMIR, TURKEY

CONTENTS

TABLE OF CONTENTS

 **01 Site Analysis**

 **02 Literature Review**

 **03 Case Studies**

 **04 The Rehabilitation Center in Izmir, Turkey**

 **05 References**

A contextual analysis is a research activity that looks at the existing conditions of a project site, along with any imminent or potential future conditions. The purpose is to inform us about a site prior to the start of our design process so that our initial design thinking about a site can incorporate considered responses to the external conditions.

An architectural site analysis will look at issues such as site location, size, topography, zoning, traffic conditions and climate. The analysis also needs to consider any future developments, or changes to the sites surroundings, such as a change of roads designations, changing cultural patterns, or other significant building developments within the area.

For the beginning of this project contextual analysis has been prepared.



Project Area



Viewpoints

3



1



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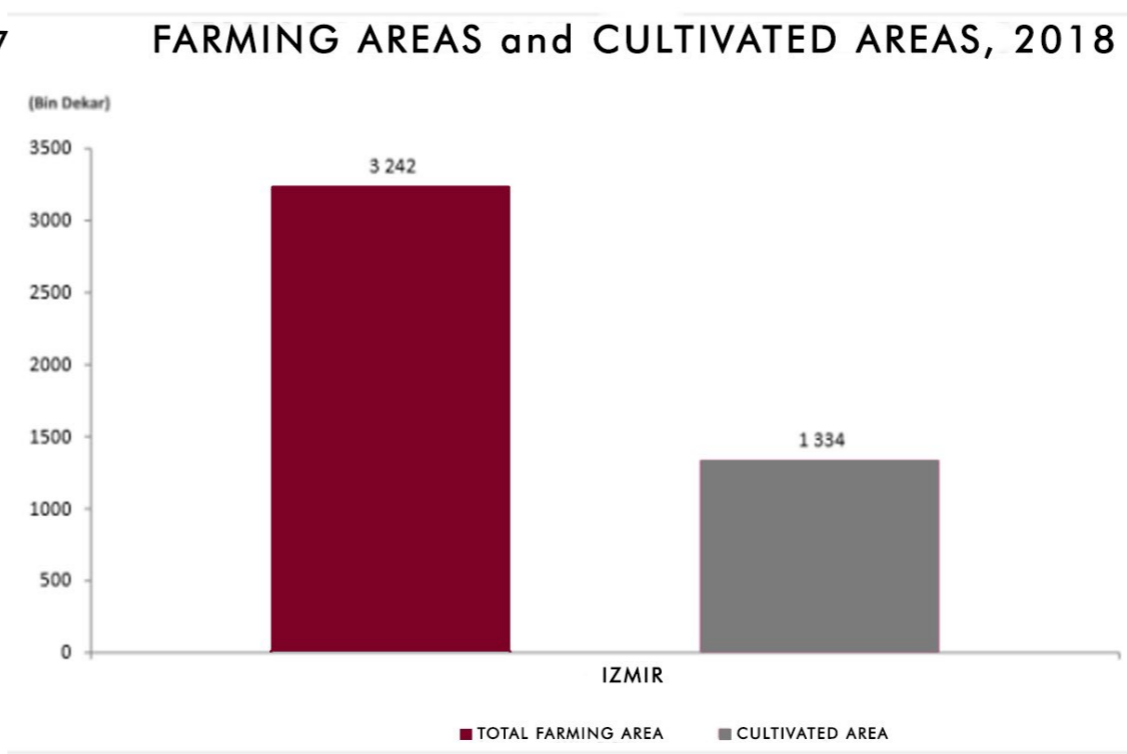
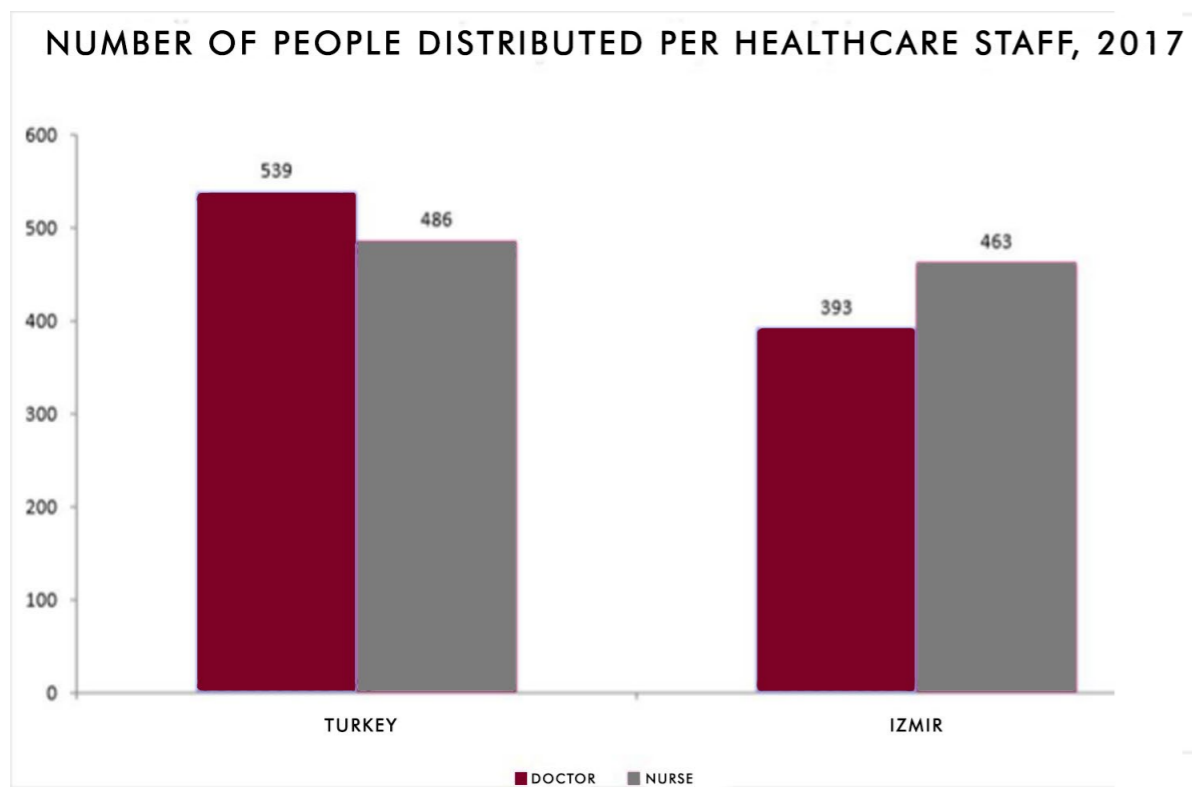
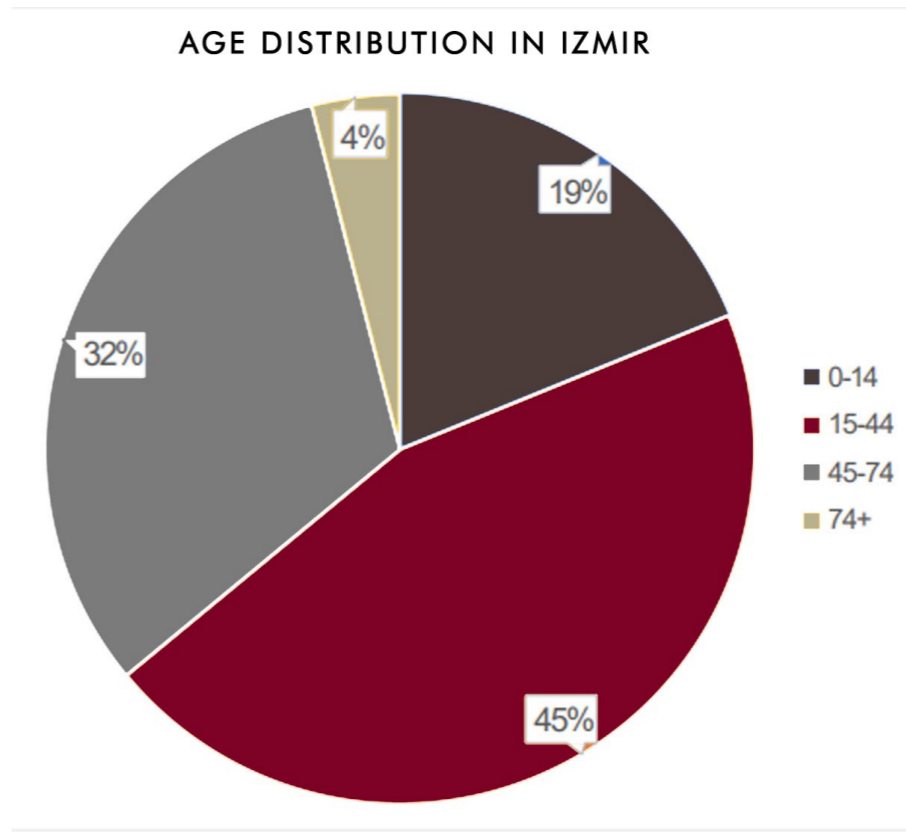
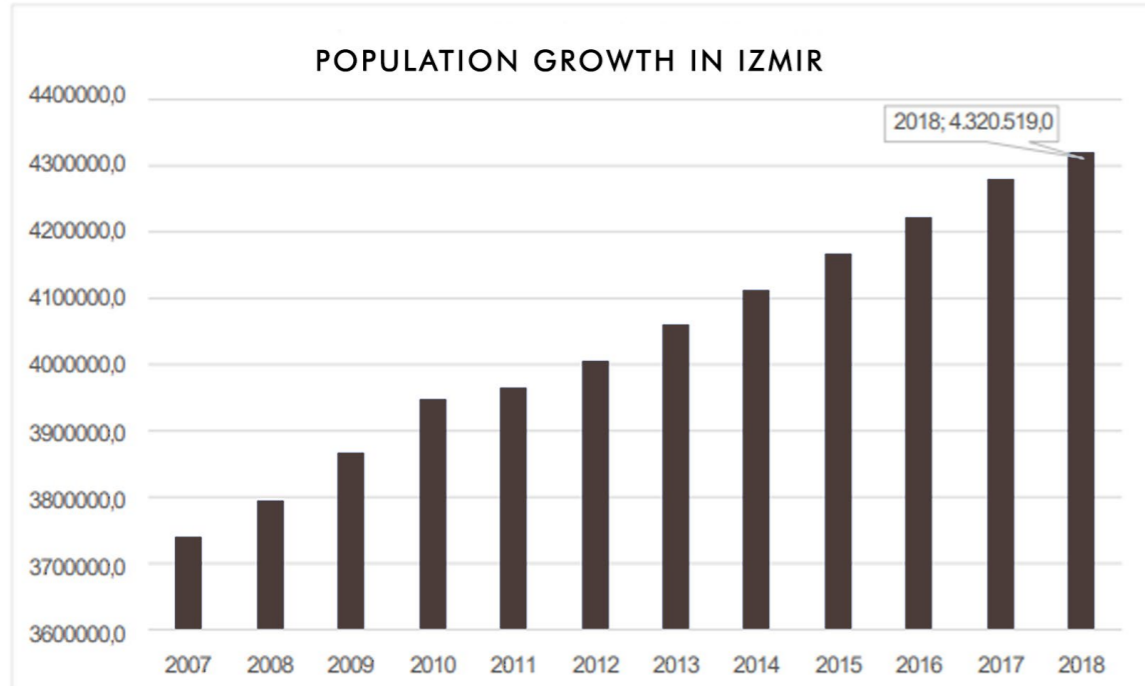
Functional

Legend

-  Residential
-  Commercial
-  Educational
-  Vacant areas
-  Green areas/Park
-  Transportation road



Demographics



- The number of patients per doctor is relatively high; jobs related to healthcare can be supplied.
- The available farming area is not used efficiently. Better opportunities can be provided to increase the crop growth.



“Smart growth” covers a range of development and conservation strategies that help protect our health and natural environment and make our communities more attractive, economically stronger, and more socially diverse. It encourages a mix of building types and uses, diverse housing and transportation options, development within existing neighborhoods, and community engagement. Development decisions affect many of the things that touch people’s everyday lives — their homes, their health, the schools their children attend, the taxes they pay, their daily commute, the natural environment around them, economic growth in their community, and opportunities to achieve their dreams and goals. What, where, and how communities build will affect their residents’ lives for generations to come

PRINCIPLES OF SMART GROWTH

Mix Land Uses

Take Advantage of Compact Building Design

Create a Range of Housing Opportunities and Choices

Create Walkable Neighborhoods

Foster Distinctive, Attractive Communities with a Strong Sense of Place

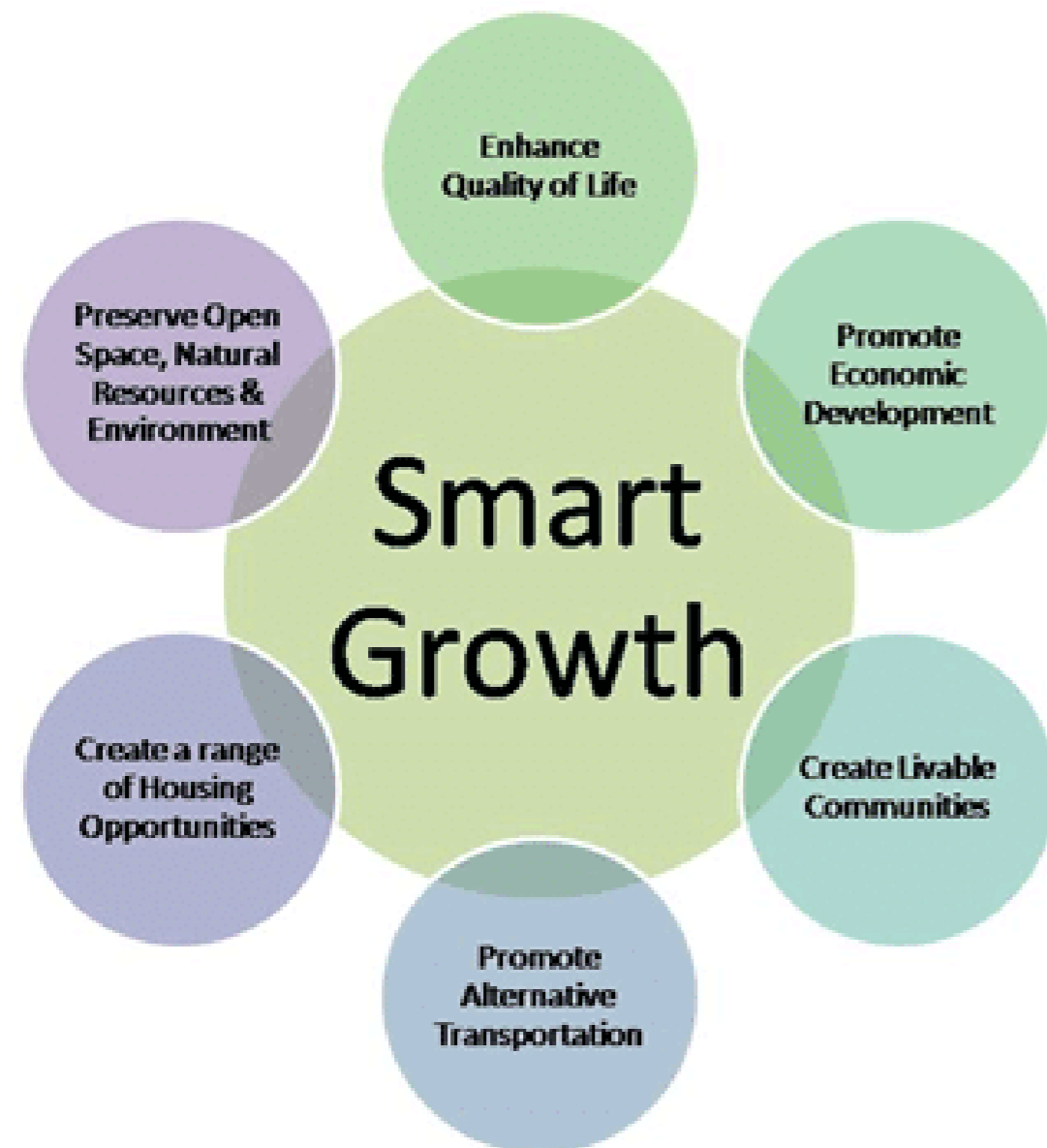
Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas

Strengthen and Direct Development Towards Existing Communities

Provide a Variety of Transportation Choices

Make Development Decisions Predictable, Fair and Cost Effective

Encourage Community and Stakeholder Collaboration in Development Decisions



The project aims to provide principles of smart growth. These principles are also based on the Ordering Systems. The ordering systems include economical, aesthetical, functional, environmental and sociocultural aspects.

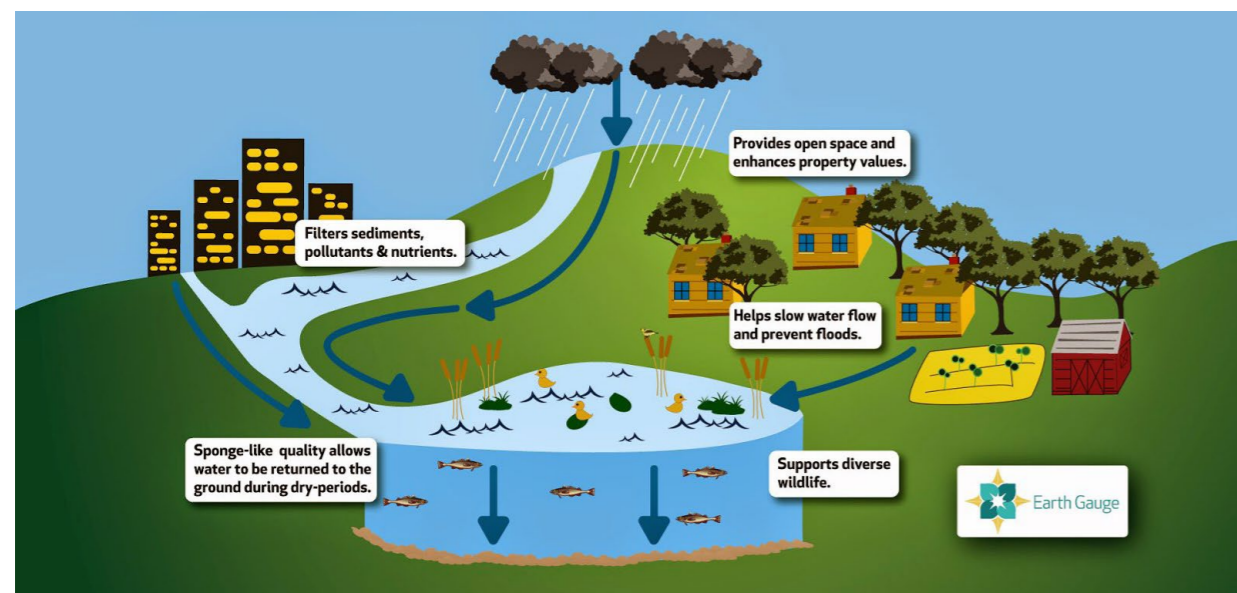
By providing useful open space areas people can be encouraged to socialise and interact with the nature. Open walkable areas also promote less use of private transportation which in turn benefits the ecology. Treatment of wetlands and cleaning the water followed by re-using it as irrigation has a magnificent effect on both ecology and economy of the city.

Supplying new job opportunities can increase the economic level of the country. This also rises the quality of life. All these factors contribute to the happiness of the population, and thus, Smart Growth is achieved.

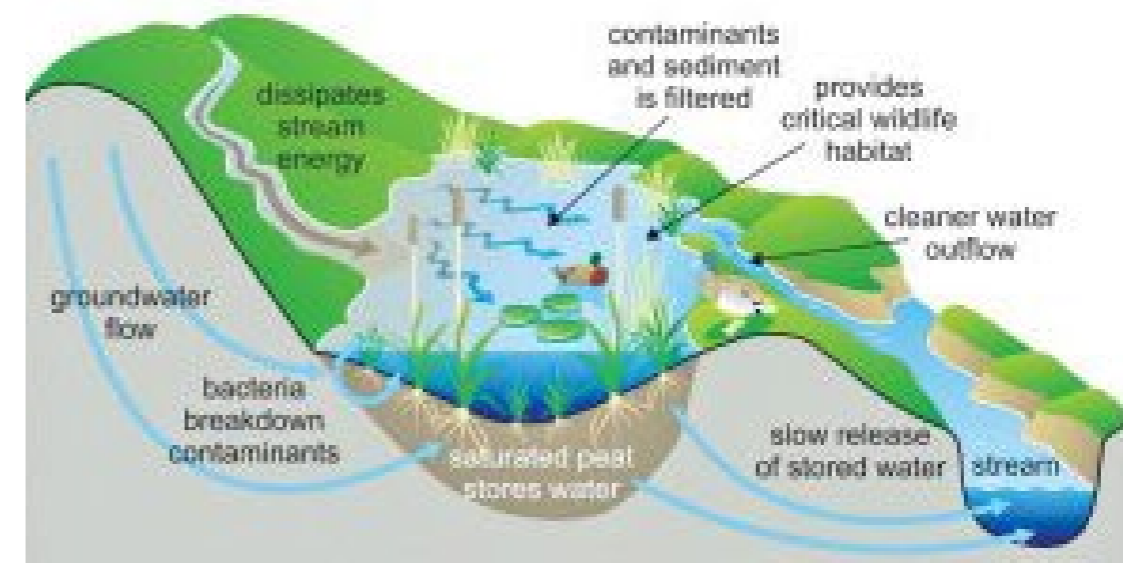
Wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year, including during the growing season. Wetlands are a critical part of our natural environment. They protect our shores from wave action, reduce the impacts of floods, absorb pollutants and improve water quality. They provide habitat for animals and plants and many contain a wide diversity of life, supporting plants and animals that are found nowhere else.



Benefits of Wetlands



How does Wetland work?



Healthy Street Design



Healthy Street Indicators

- Pedestrians from all walks of life
- Easy to cross
- Shade and shelter
- Places to stop and rest
- Not too noisy
- People choose to walk, cycle and use public transport
- People feel safe
- Things to see and do
- People feel relaxed
- Clean air

The Healthy Streets Approach focuses on creating streets that are pleasant, safe and attractive, where noise, air pollution, accessibility and lack of seating and shelter are not barriers that prevent people - particularly our most vulnerable people - from getting out and about.

WHAT IS A HEALTHY STREET?



ACTIVE SIDEWALKS

Sidewalks should be smooth, wide, feel safe, and have appropriate transitions to the street, making them easy to walk or use a wheelchair on

DEDICATED BIKE LANES

Simple pavement markings creating a dedicated bike lane make both motorist and bicycle movement more predictable, and therefore safer for both. They may increase the likelihood of casual riders using bicycles for transportation

DEDICATED BIKE LANES

One lane of car traffic going in each direction with a two-way-left-turn-lane (TWLTL) in the center would reduce the amount of car crashes on Government Street by providing turning vehicles a refuge from through traffic, while keeping through traffic moving more efficiently

SAFE CROSSWALKS

Clearly marked crosswalks allow pedestrians and wheelchair users to cross streets safely, while making sure cars know where to expect them

PLANTING STRIP

Street trees and landscaping slow speeding traffic, improve the aesthetics of the roadway, provide shade, and create a buffer between cars and people, making a more inviting environment for pedestrians

GREEN SPACES

Parks and public green spaces create a destination, encouraging community interaction and providing a rest from the surrounding urban environment

SO WHAT?

Ecological Landscapes / Wetland restoration

- Connecting pond to the sea followed by cleaning it.
- Introducing more green areas in a wise way
- Application of smart growth principles

Use of wetland as a cultivation area

- Re-using wetland as an irrigation source after treatment
- Full use of land for crop growth

Open spaces for social interaction

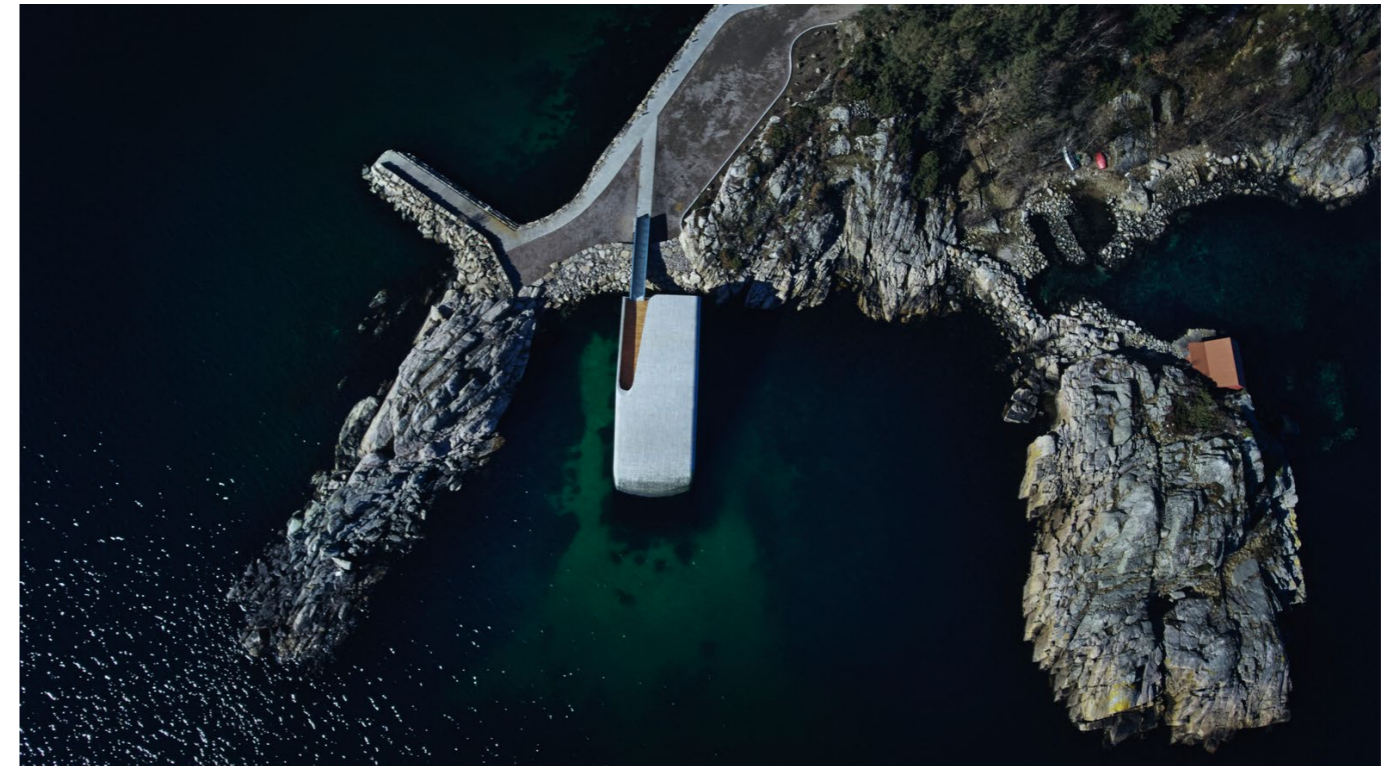
- Use of greenery and pond water as natural elements
- Increasing green open space opportunity for healthy population

User friendly roads

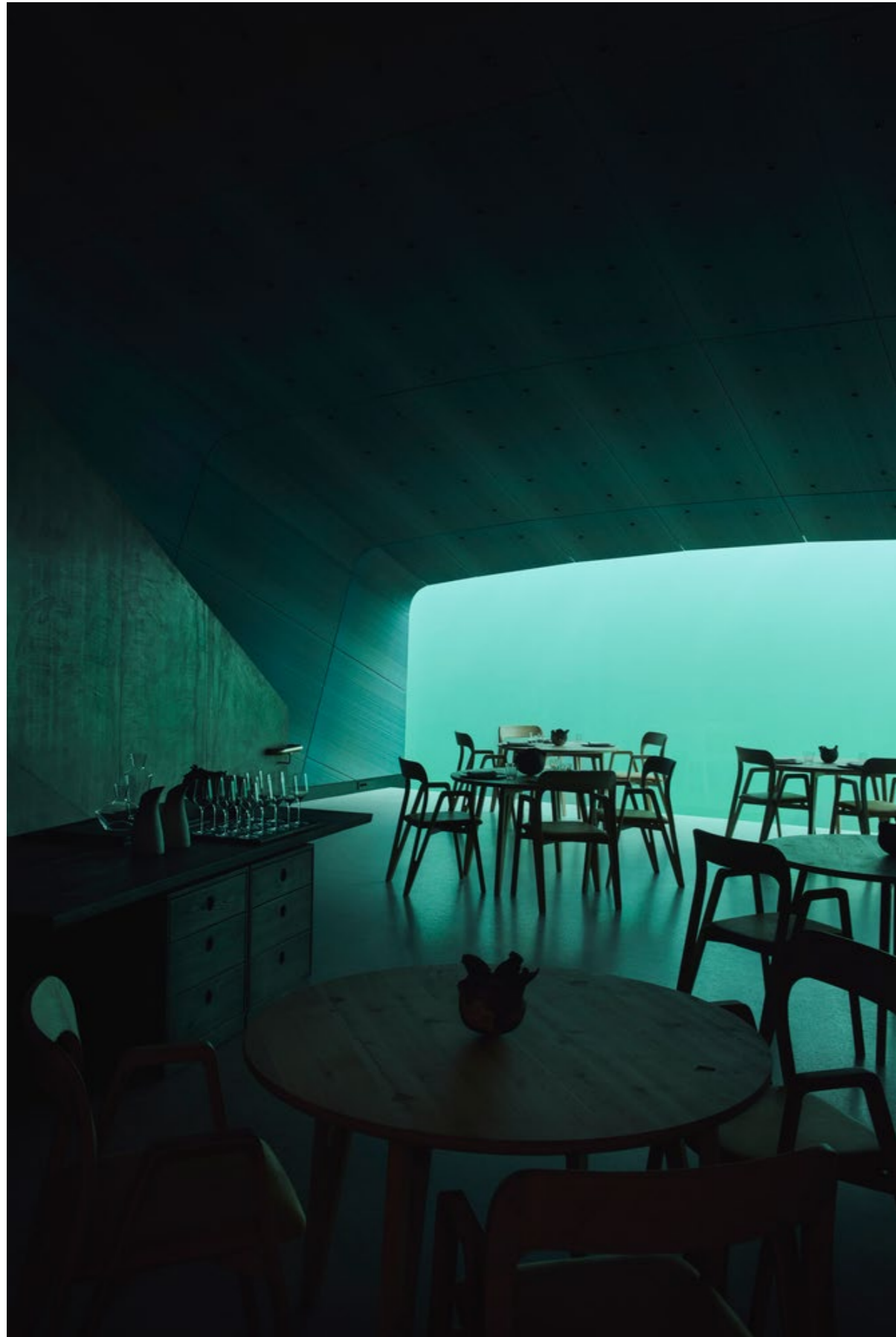
- Good passage from softscape to hardscape
- Introducing car, pedestrian and bike road paths in user friendly way

Under (Underwater Restaurant) by Snøhetta

Located at the southernmost point of the Norwegian coastline, where the sea storms from the north and south meet, the project is situated at a unique confluence. Marine species flourish here in both briny and brackish waters to produce a natural abundance in biodiversity at the site. The Snøhetta-designed restaurant also functions as a research center for marine life, providing a tribute to the wild fauna of the sea and to the rocky coastline of Norway's southern tip.

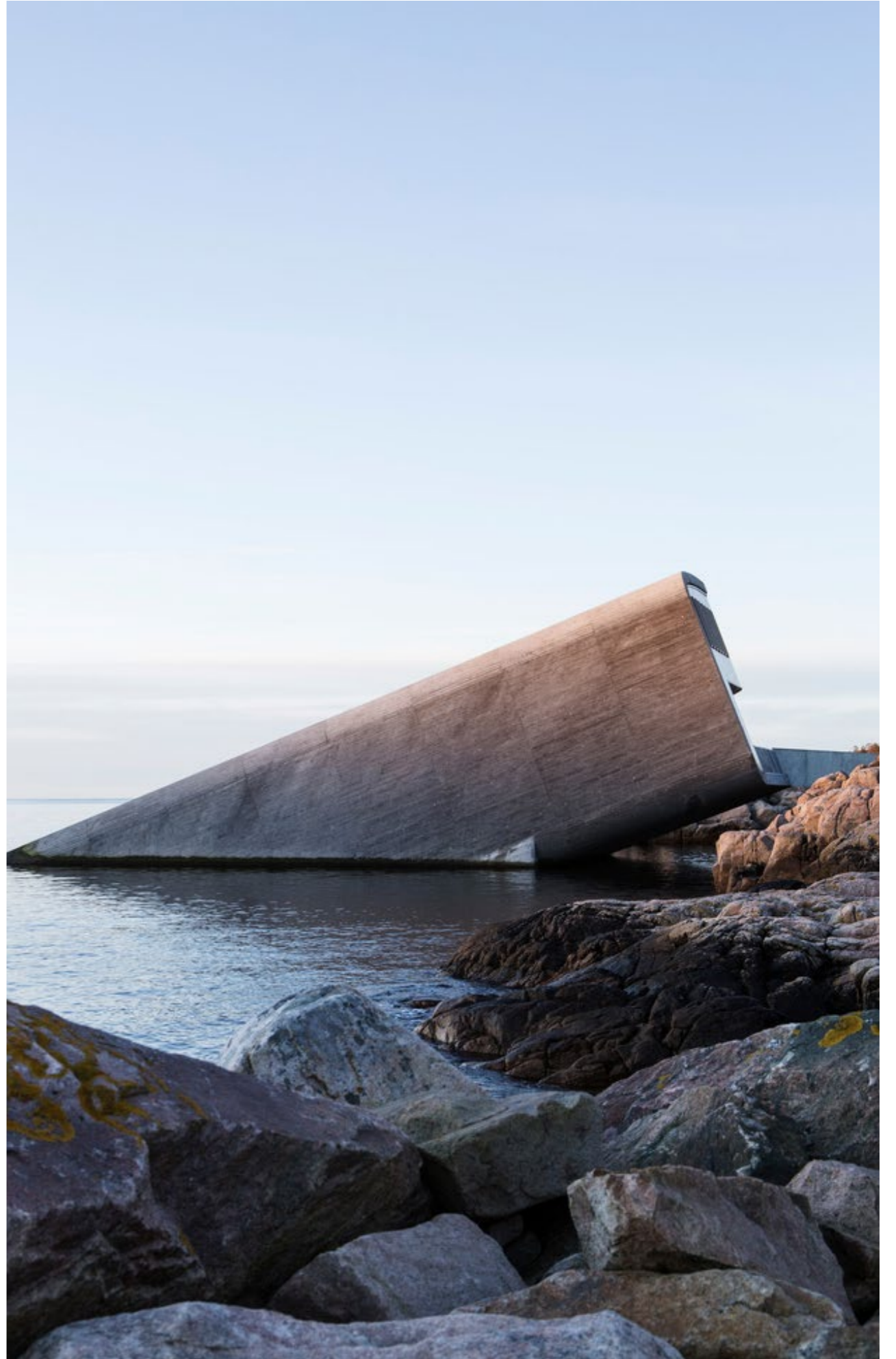


As a metaphor for the journey of descent, the color of the textile-clad interior turns darker and more intense the deeper one goes below water. The bespoke textiles stretched over custom acoustic panels, reference the colors of a sunset dropping into the ocean, accompanying one's passage down the stairs. At the entrance, the ceiling's neutral color deepens into a sunset pink, intense coral, sea green, and finally culminates in a midnight blue as one arrives at the dining room. The subtle elegance of the finely woven ceiling panels lends a serene ambiance to the building.



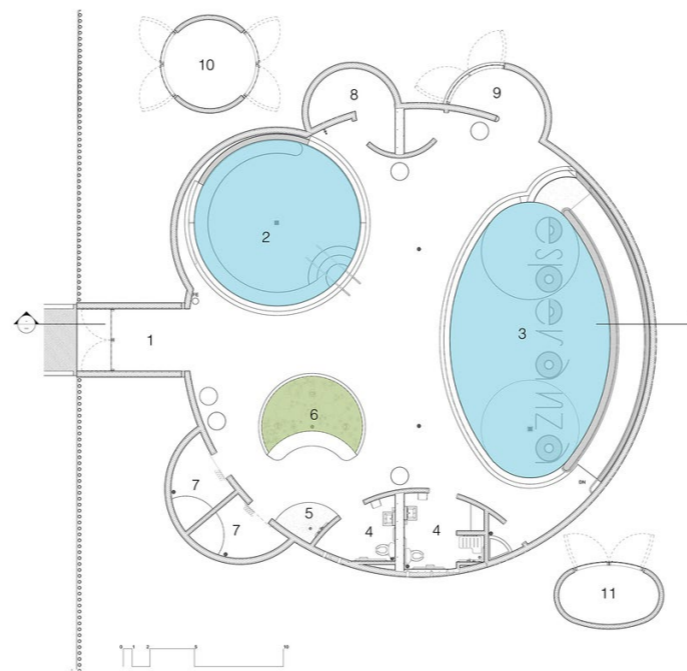
The sophisticated lighting system carefully minimizes the reflectivity of the panoramic window and maximizes the view of sea life outside the restaurant. 380 LED lamps are installed on the ceiling panels, illuminating the dining area with subtle yet pointed light. The light can be easily adjusted to respond to differing light conditions inside and outside the building. The seabed outside will be lit up with artificial lighting during the dark hours, in order to attract fish.





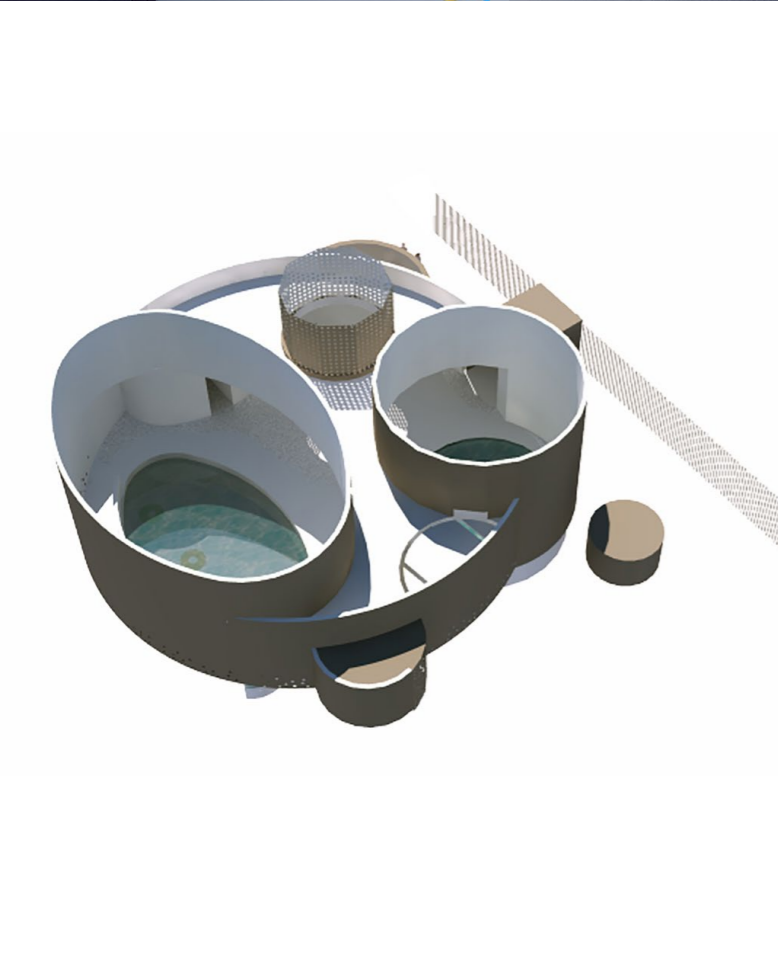
Therapeutic Pools for La Esperanza School by FUSTER + Architects

The Pools are designed as a therapeutic facility for use by children with physical disabilities between the ages of 5 and 16 years. The facilities are open to the public but will be used primarily by students of La Esperanza School; thus the yellowish-green “verde esperanza” color of the exterior and the word “esperanza” (“hope”) written on the bottom of the main pool. This is the first structure of its kind in Puerto Rico.



The protagonists of the space are the light and the sky. One of the most important intentions of the project was to create a unique space where natural light constantly transforms the atmosphere inside; creating a direct connection between the user and nature and facilitating the healing process.

Every pool is treated as a courtyard; a prototypical Puerto Rican design element rooted in the colonial and vernacular architectures of the island. From within the pools the ceiling apertures with their tall cylindrical parapets frame the sky generating a direct relationship between users and the celestial sphere. This is important because children receive therapies while floating on their backs, looking upwards.



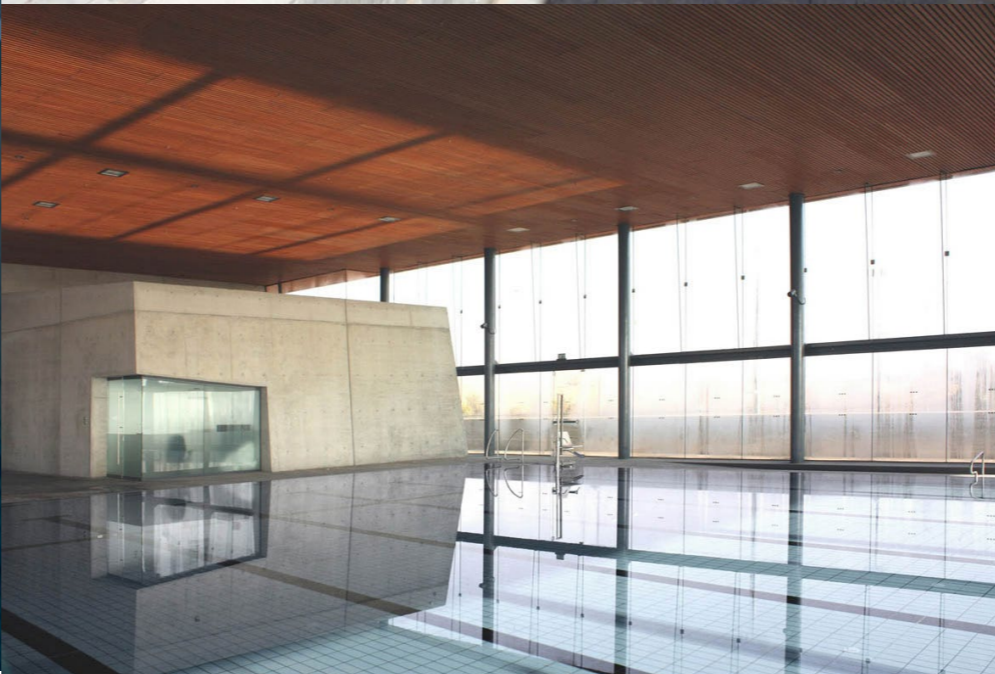
Beit-Halochem by Kimmel-Eshkolot Architects



Developed near Beer Sheva city in Israel. The works took three years, so the inauguration was in April 2011. The design of the center is taken from a landscape, it is situated on the border of city outskirts and desert, so the shape reminds rocks. Big concrete blocks look like huge stones. The architects used quite the same materials in and outside, they are: plaster, wood and concrete. Opened and free space of the structure is lined by double height that brings a lot of natural light. Plane long roof creates shadow around the structure and covers terraces. Due to a little inclination of the ground, the center has two "platforms" with entrances. The gross area of 6000 sqm fits a light combination of public, patient and administration zone, however the main space occupy activity and rehabilitation facilities.

The program represents spaces for different kind of competitive sports, swimming and hydrotherapeutic pools, auditorium, lounge, terraces, art studios, multipurpose classes and café. It is planned as a one-day stay center without a possibility to be a resident and to live there. Beit Halochem Centers aim at providing solutions to the needs of its members based on their individual, respective disability. Veterans with every kind of disability take part in sports and other activities, which form an essential part of their rehabilitation.





Greenhouse Botanical Garden Grueningen by idA

The design was inspired by the surrounding forest, not the built environment. Both the formal vocabulary and the structural concept derive from nature. The pavilion is conceived to harmonize with and expand the forest. The form was developed using Voronoi tessellation, also known as natural neighbor interpolation. Analogous to cell division in nature, the geometry of the roof as surrounding membrane was determined by the position of the old and new trunks.



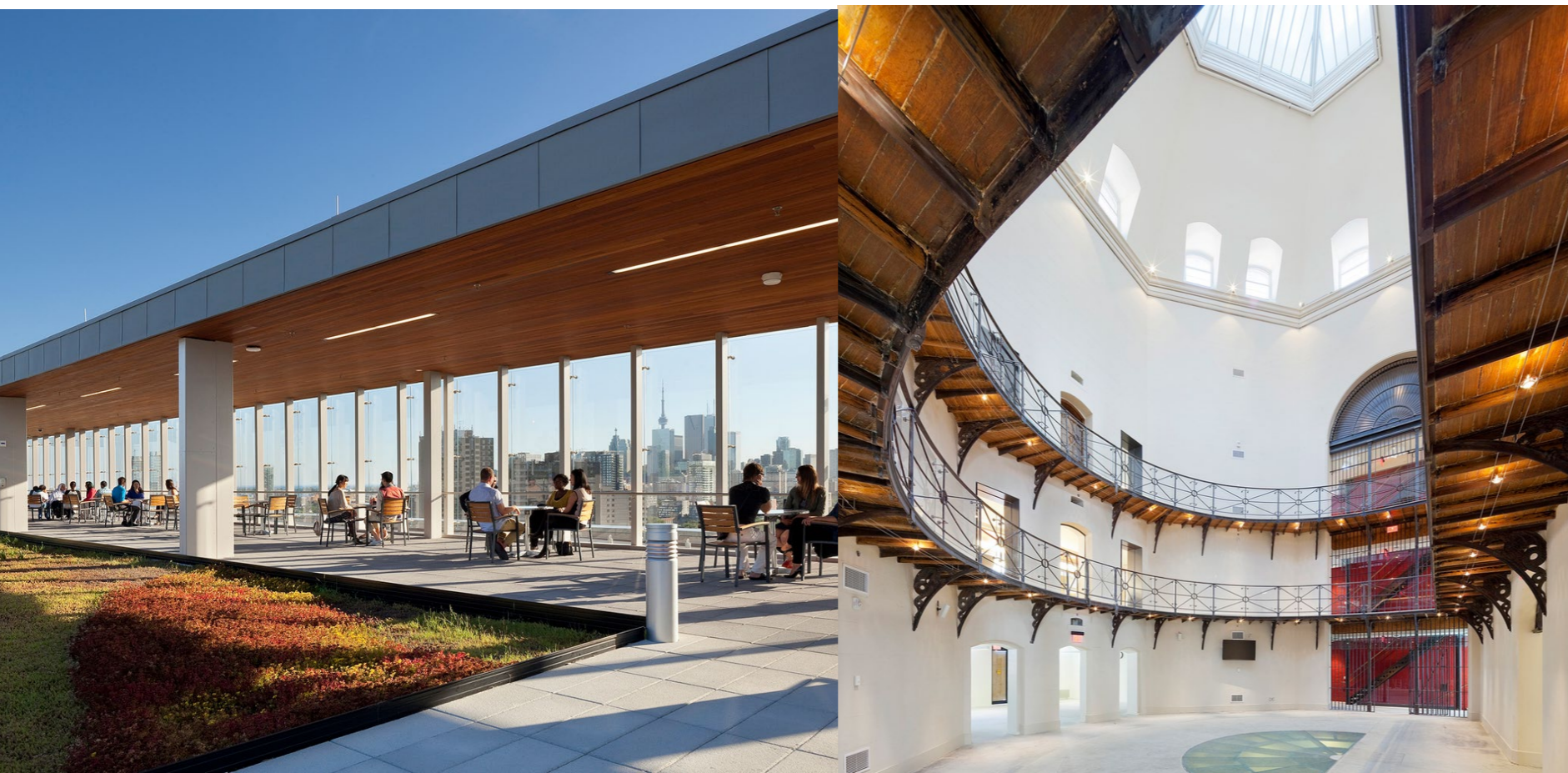
The forest was augmented by four steel trees that form the primary structural system of the pavilion. At about five meters, the trunks branch toward the treetop, which forms the natural roof. A secondary glass construction, suspended from the steel branches, encloses the inner space of the greenhouse.



Bridgepoint Active Healthcare

**by Stantec Architecture + KPMB Architects + HDR Architecture + Di-
amond Schmitt Architects**

Bridgepoint Active Healthcare in Toronto is the largest facility of its kind in Canada focused on the treatment of complex chronic disease and rehabilitation. Bridgepoint's leaders envisioned a new way of delivering healthcare in a new kind of hospital: a civic building - an urban centre - in which healthcare and community come together. The intent is to blur the traditional distinction of institutional space and public access and to provide an inspirational setting to assist patients in their recovery.



The design response recognizes the role landscape, nature and community play in supporting health. It optimizes the therapeutic benefits of natural light, access to nature, and views of the surrounding park and city skyline to ensure patients and staff feel constantly connected to the world outside. With an average patient stay of three months, there was strong impetus to create an environment that facilitates recovery and wellness.

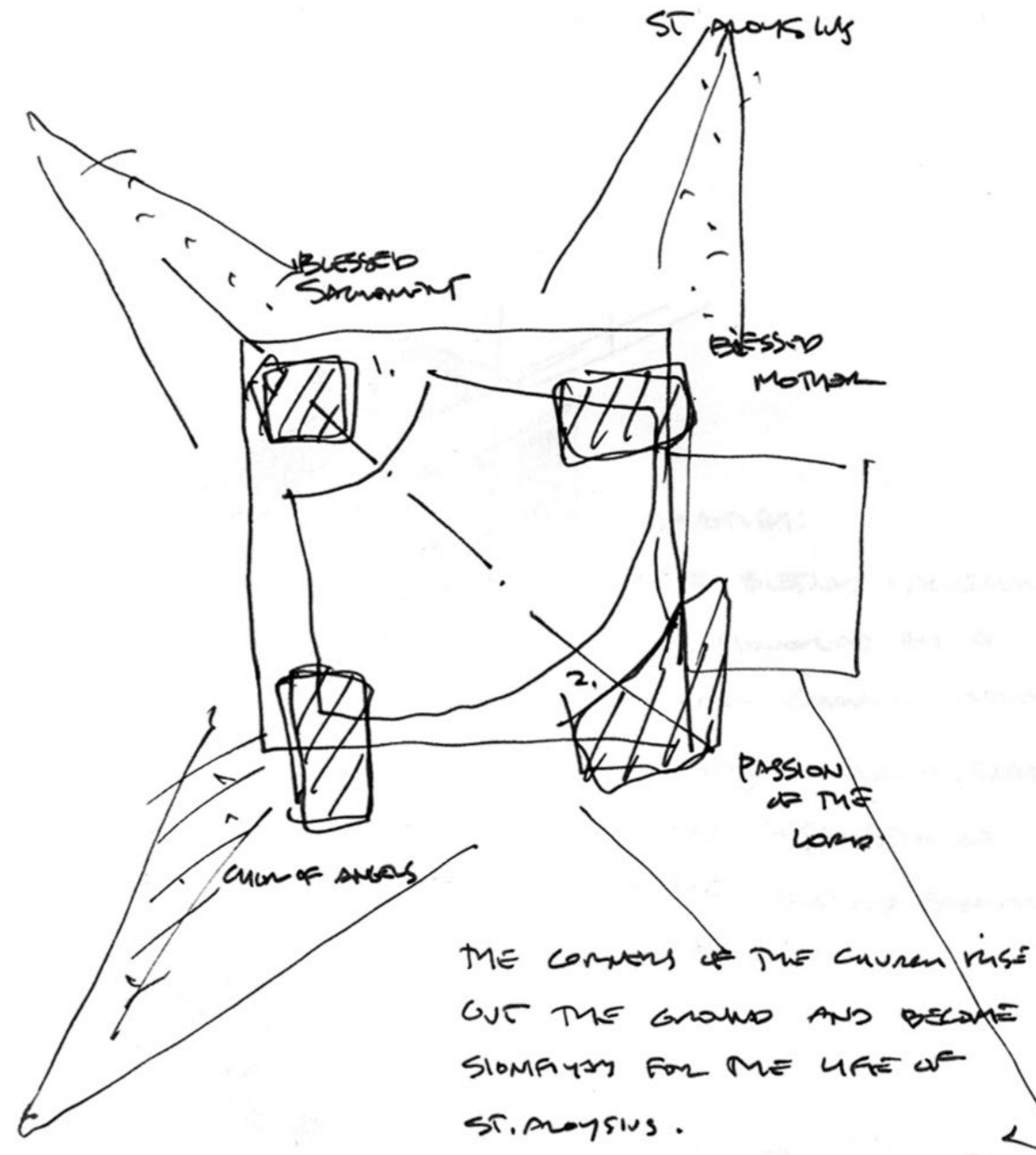
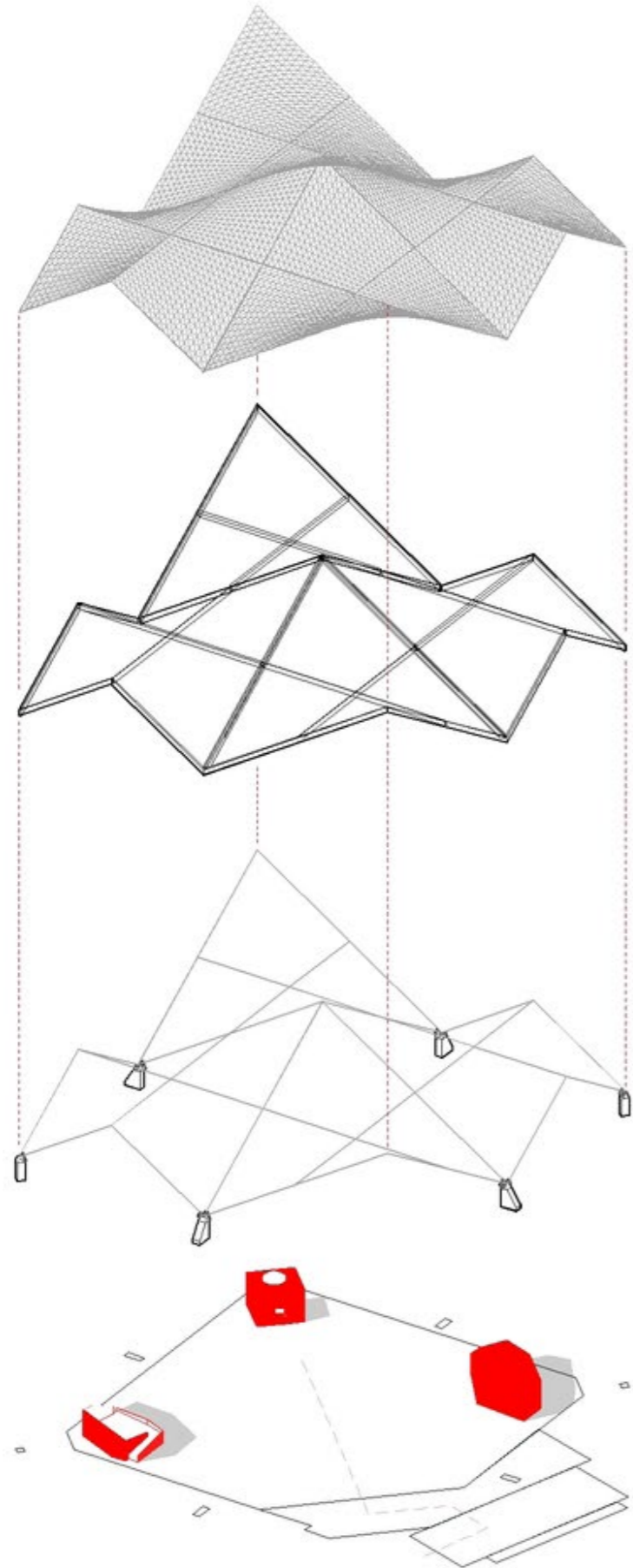


The Church of St. Aloysius by Erdy McHenry Architecture

The new Church of Saint Aloysius tells the story of its purpose through its architectural expression. Two significant conceptual explorations gave form to the design for this church: “re-pitching the tent”, expressed in the delicate soaring roof lines evoking the concept of simple worship and the Four Devotions of Saint Aloysius.

The hyperbolic paraboloid roof is used most often as an inexpensive solution to long-span roof requirements. As such, it is used for utilitarian purposes, such as sports arenas and athletic facilities. The tent of St. Aloysius Church is fabricated from standing seam metal panels.



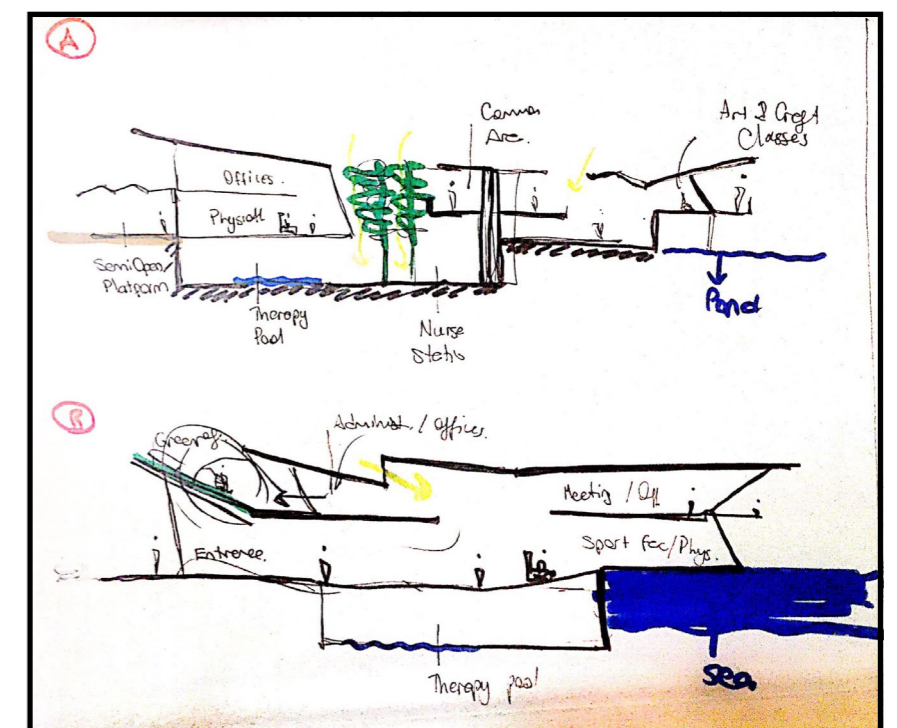
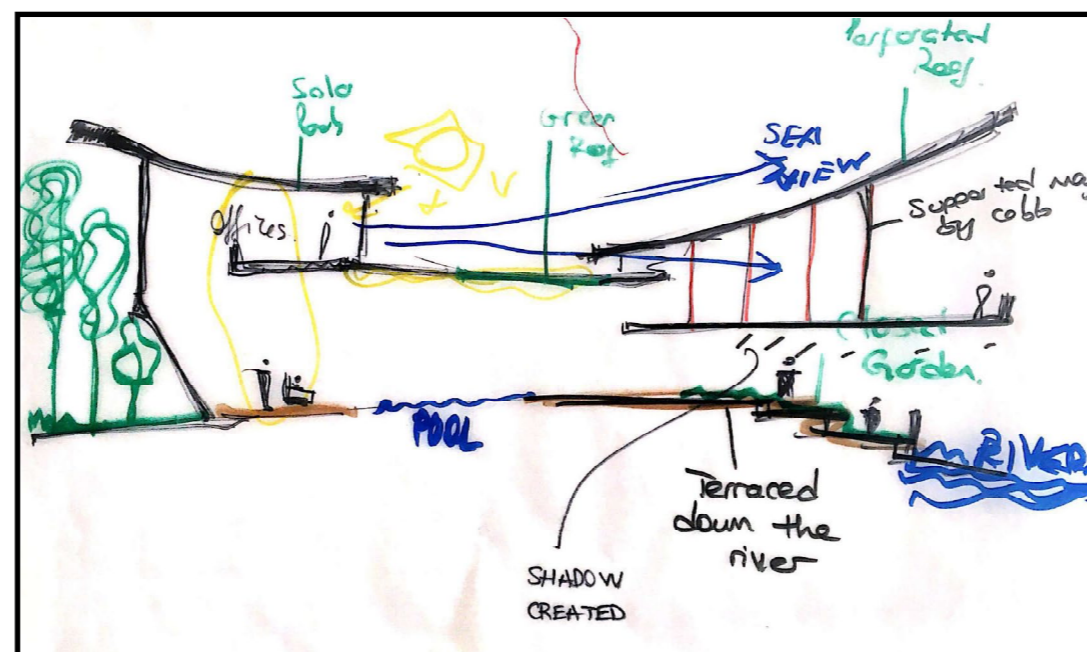
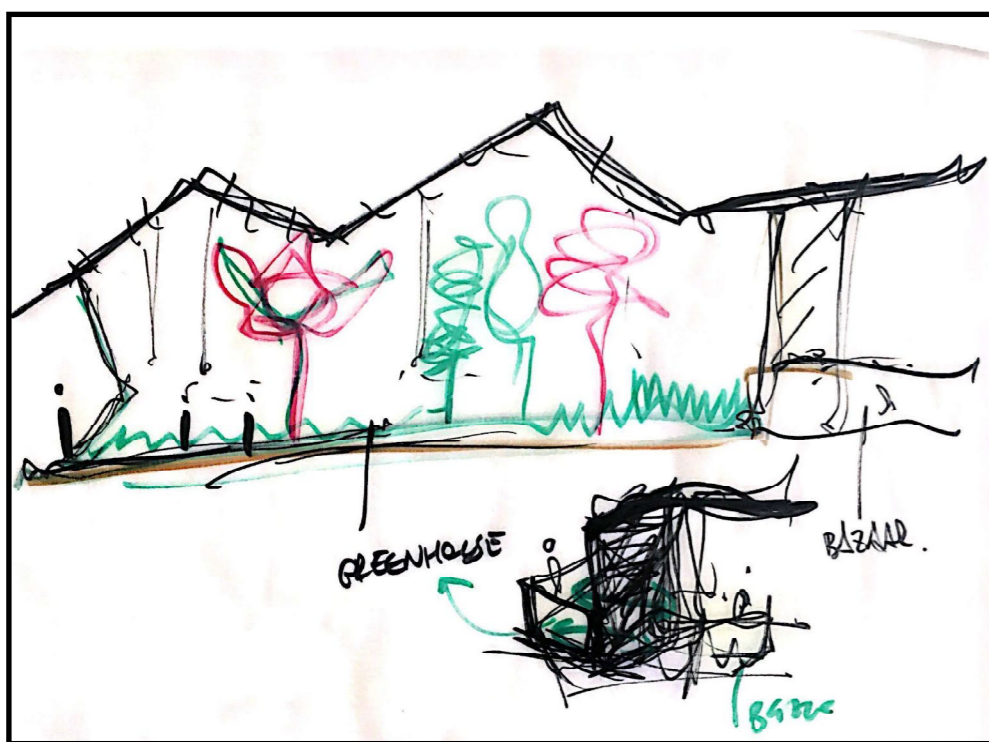
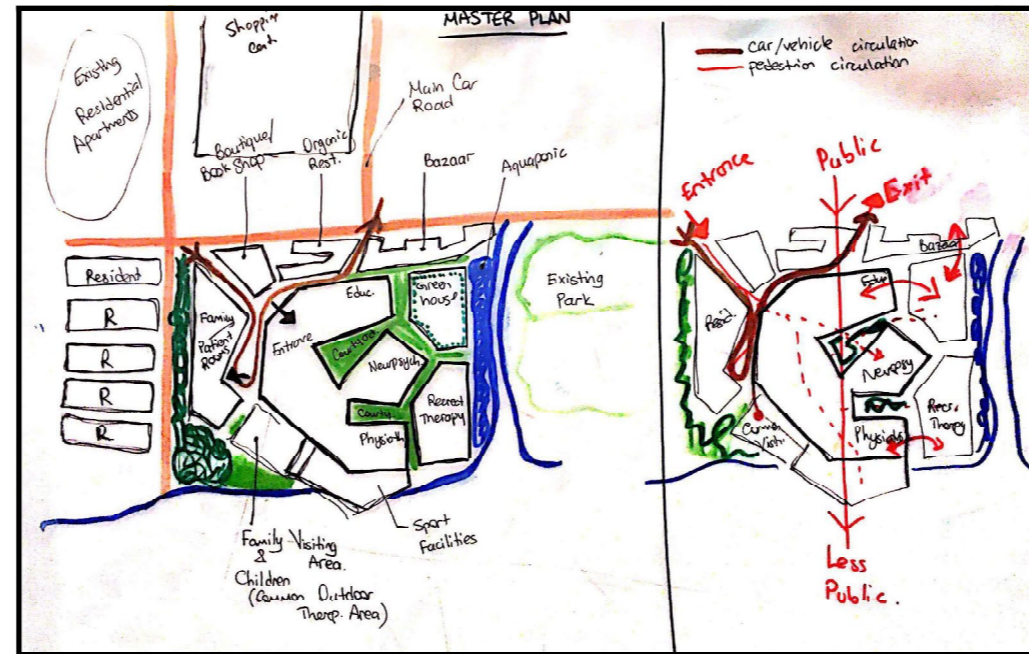
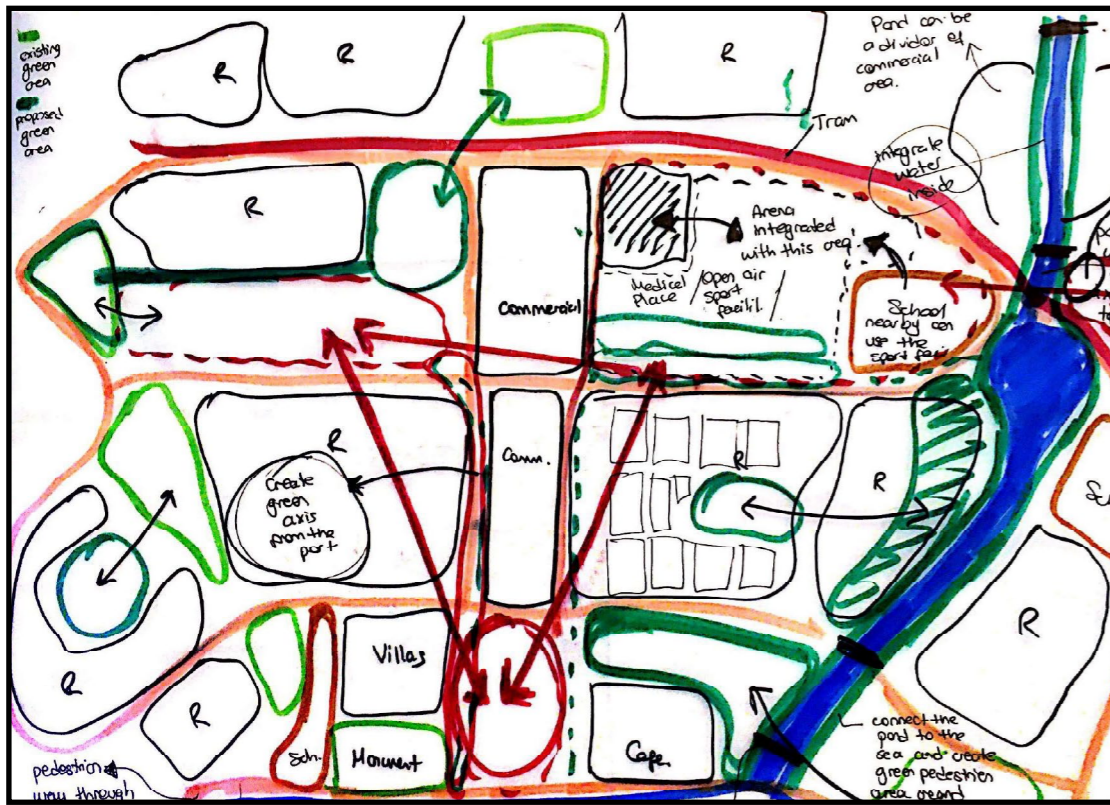




04 The Rehabilitation Center in Izmir, Turkey



Early Design Sketches

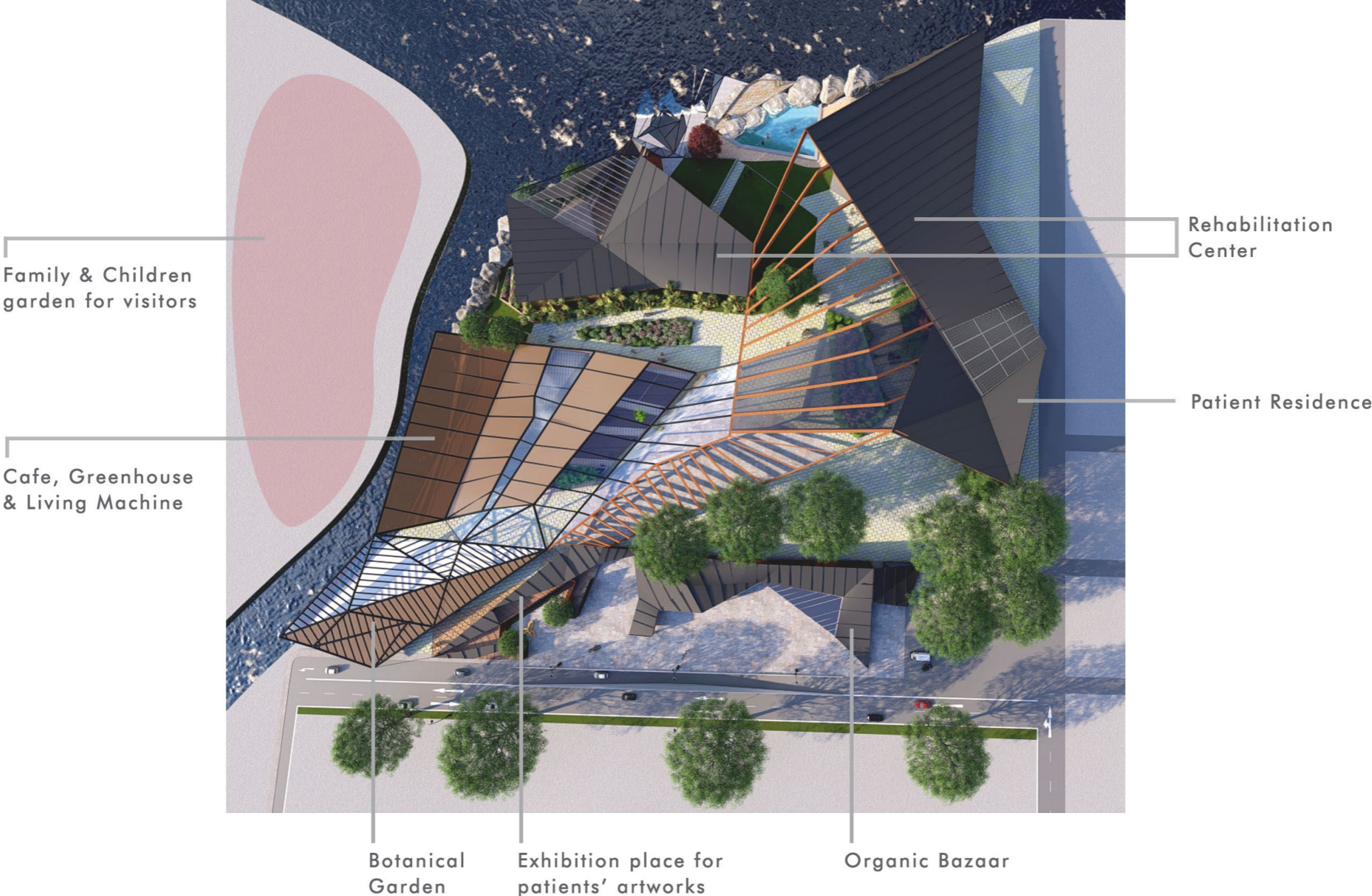


Site Plan

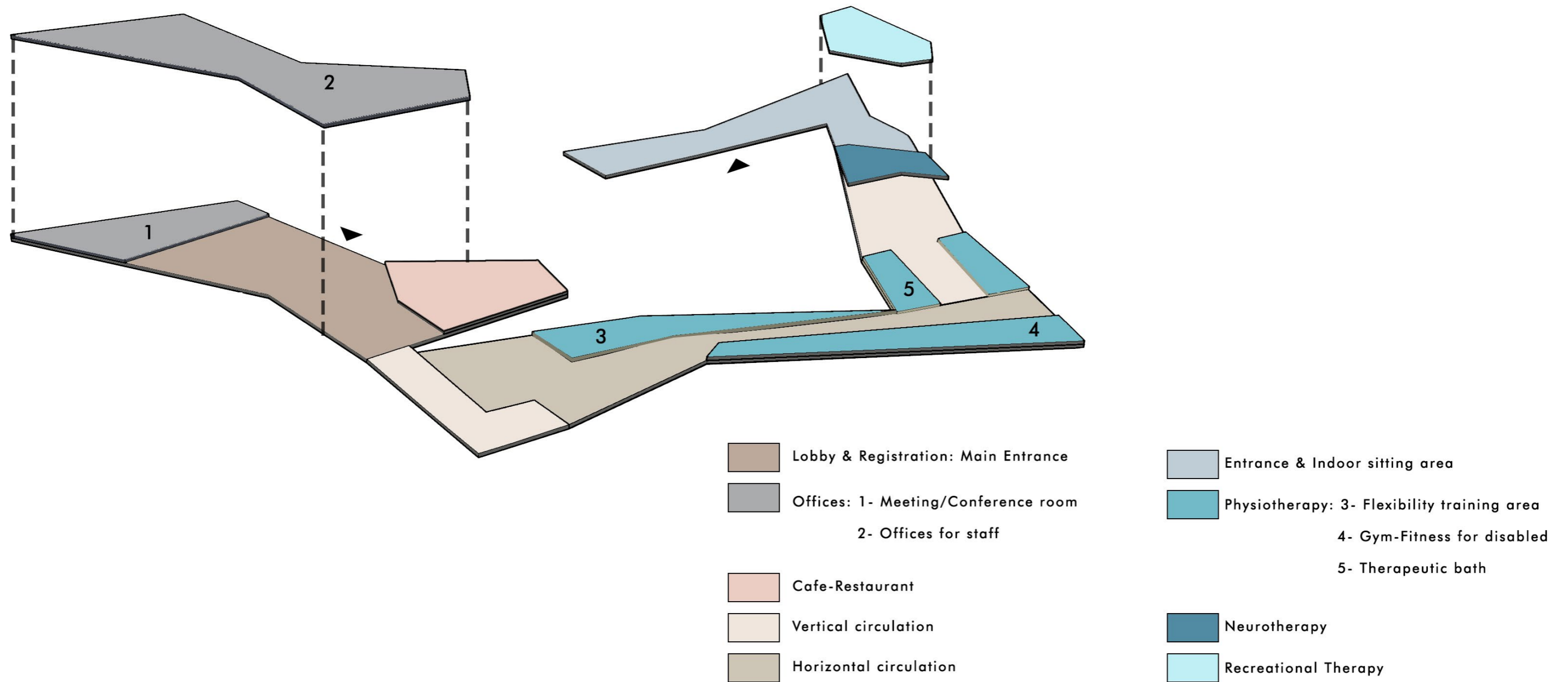
Apart from Rehabilitation Center, the program includes patient residence, greenhouse where patients who are ready for that position can work followed by selling products in organic bazaar, which is also a part of the program.

Botanical Garden and Exhibition place are open to public, and are there to stimulate motivation for patients.

As for sustainable terms, Living machine inside a greenhouse provides water treatment facility.



Conceptual Floor Plan



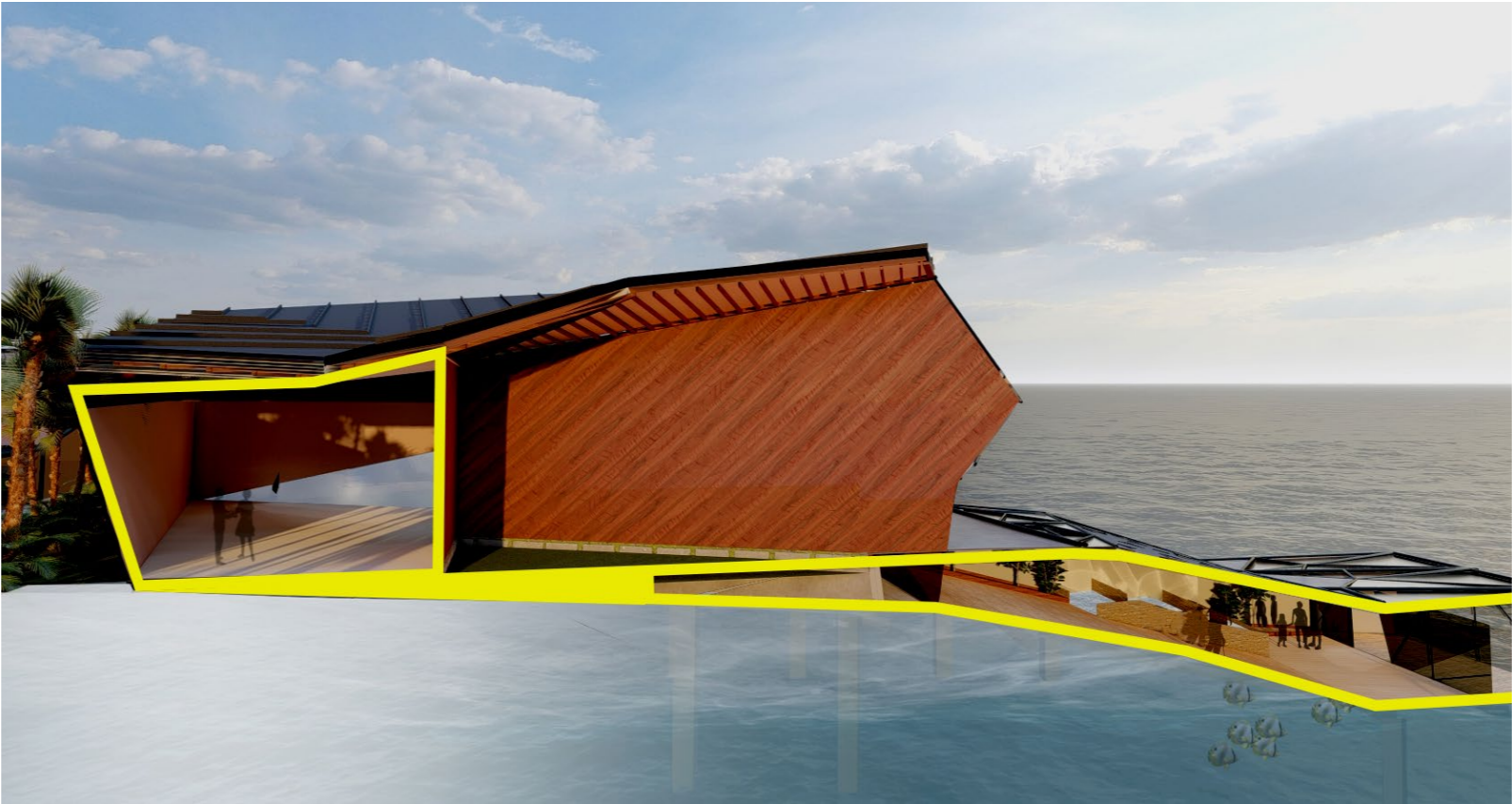
There are three main therapy areas; **Physiotherapy, Neurotherapy and Recreational Therapy areas.**

Physiotherapy area includes Flexibility training, gym and hot therapy bath areas.

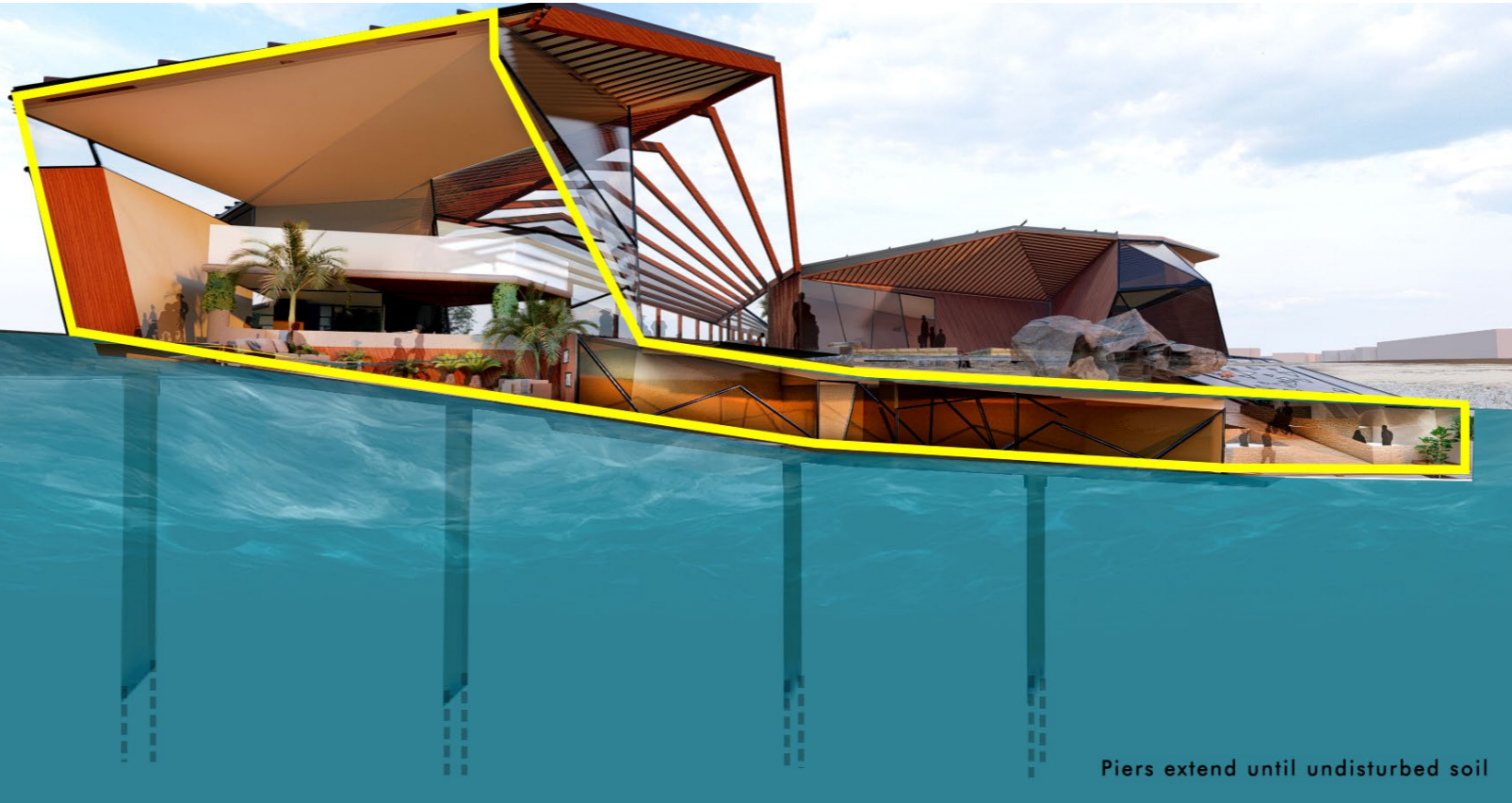
In Recreational Therapy area patients have an opportunity to do art & crafts works and paintings, which then will be exhibited in the Exhibition Area.

Section Perspectives

East Section

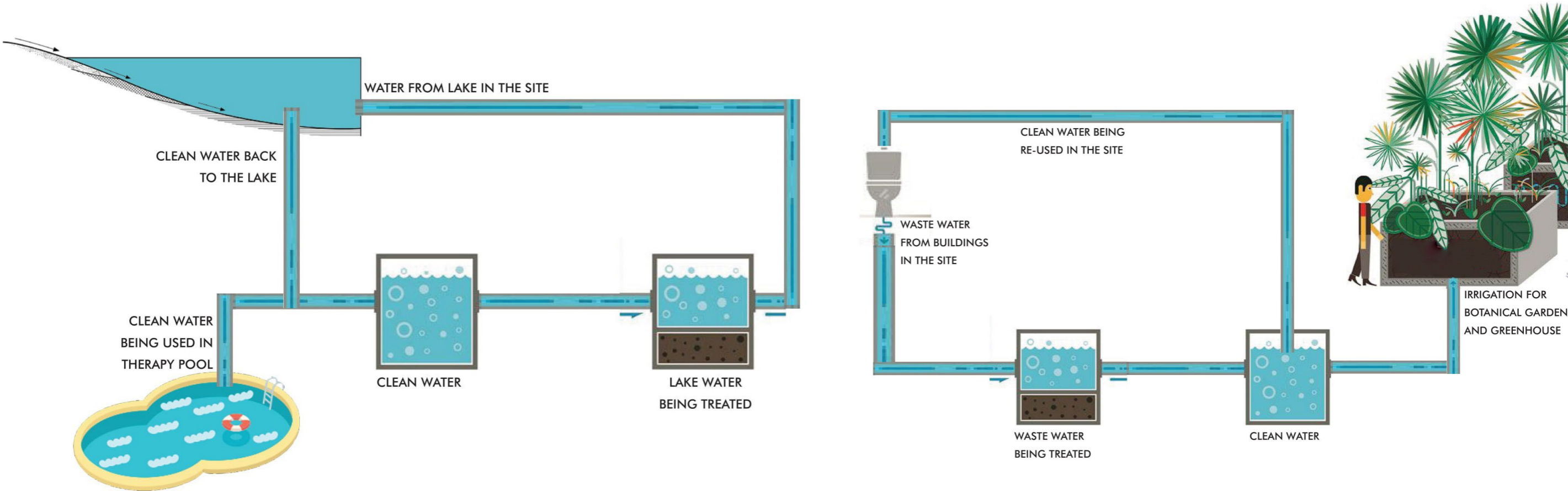


South Section



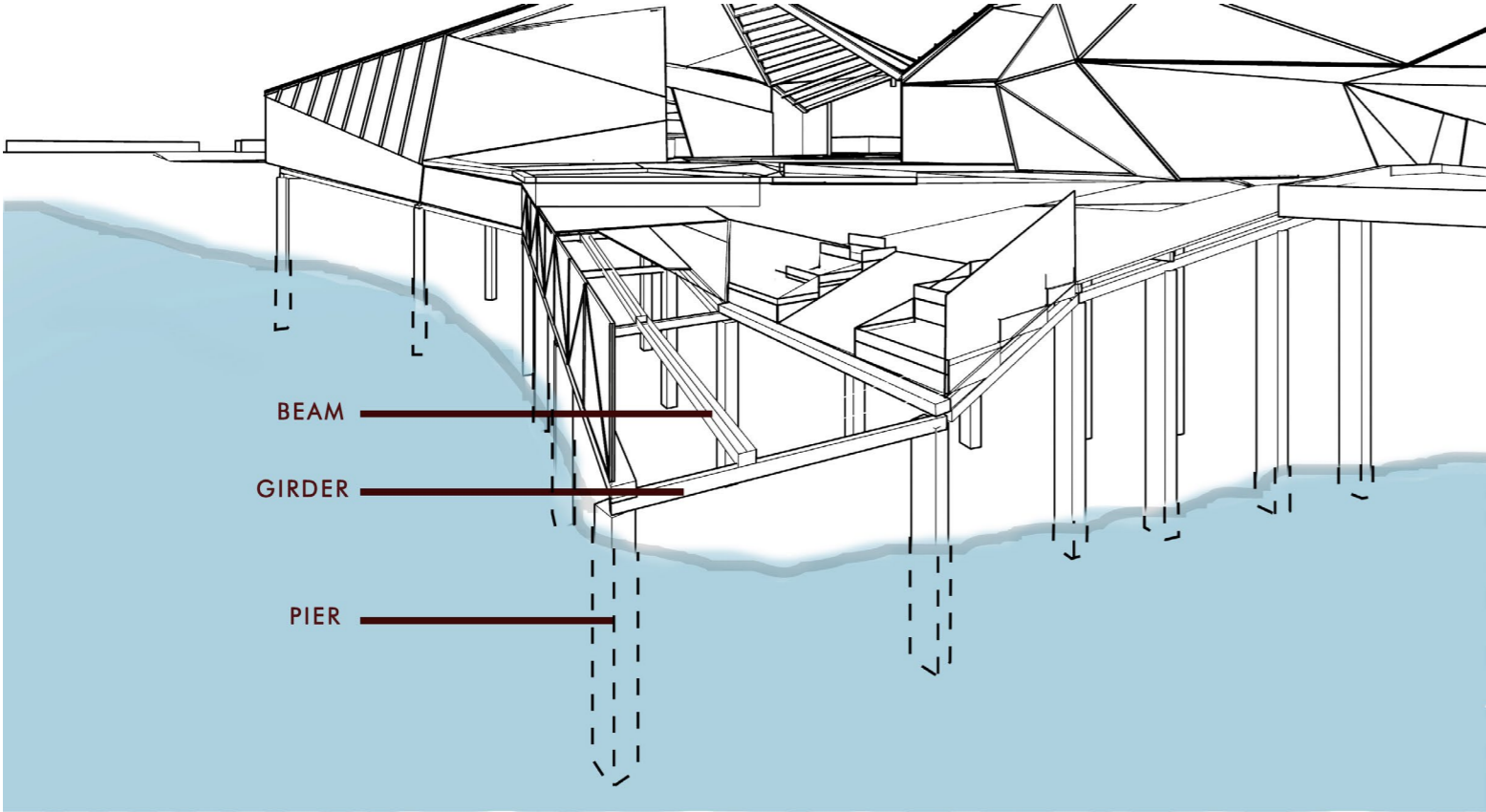
Living Machine - Water Treatment Strategy

Living Machine which is located in the Greenhouse area of the site has a water treatment function. As a first strategy, water is taken from the lake, treated followed by using half of it in therapy pool and the other half is sent back to the lake. Over time, the lake is supposed to be cleaned by this method. For the second strategy, waste water from the buildings in the site will be treated in Living Machine. Clean water will be re-used both for irrigation purposes in greenhouse and for daily usage within the building.

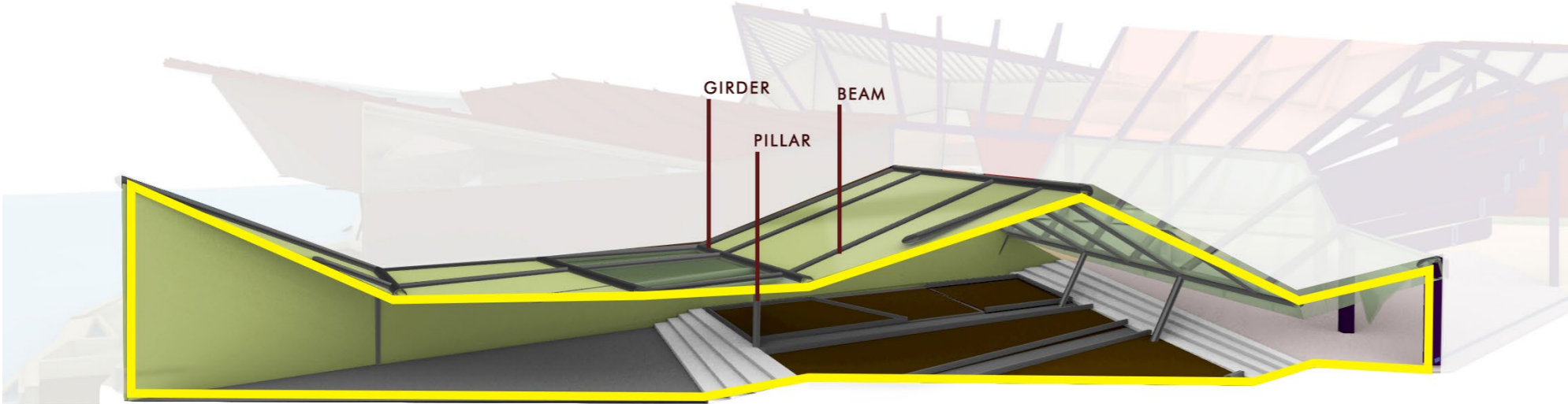


Structural Diagrams

Underwater Structure

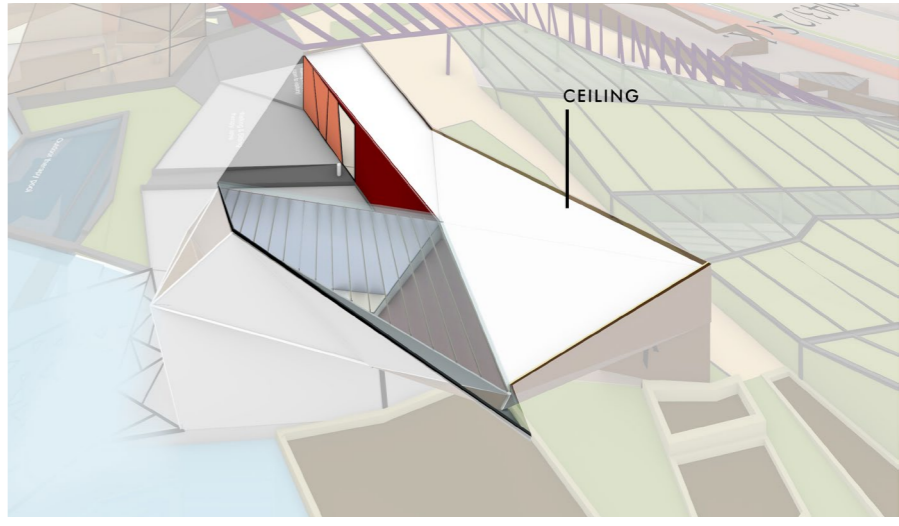
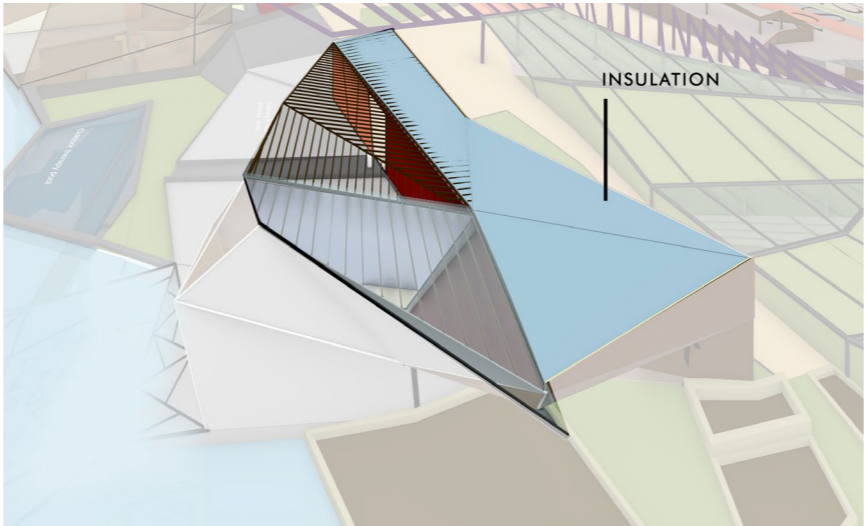
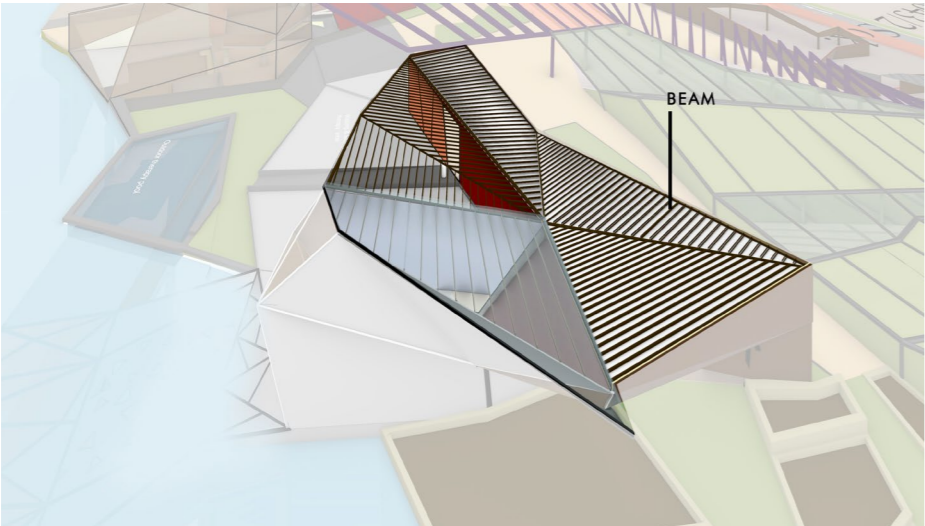
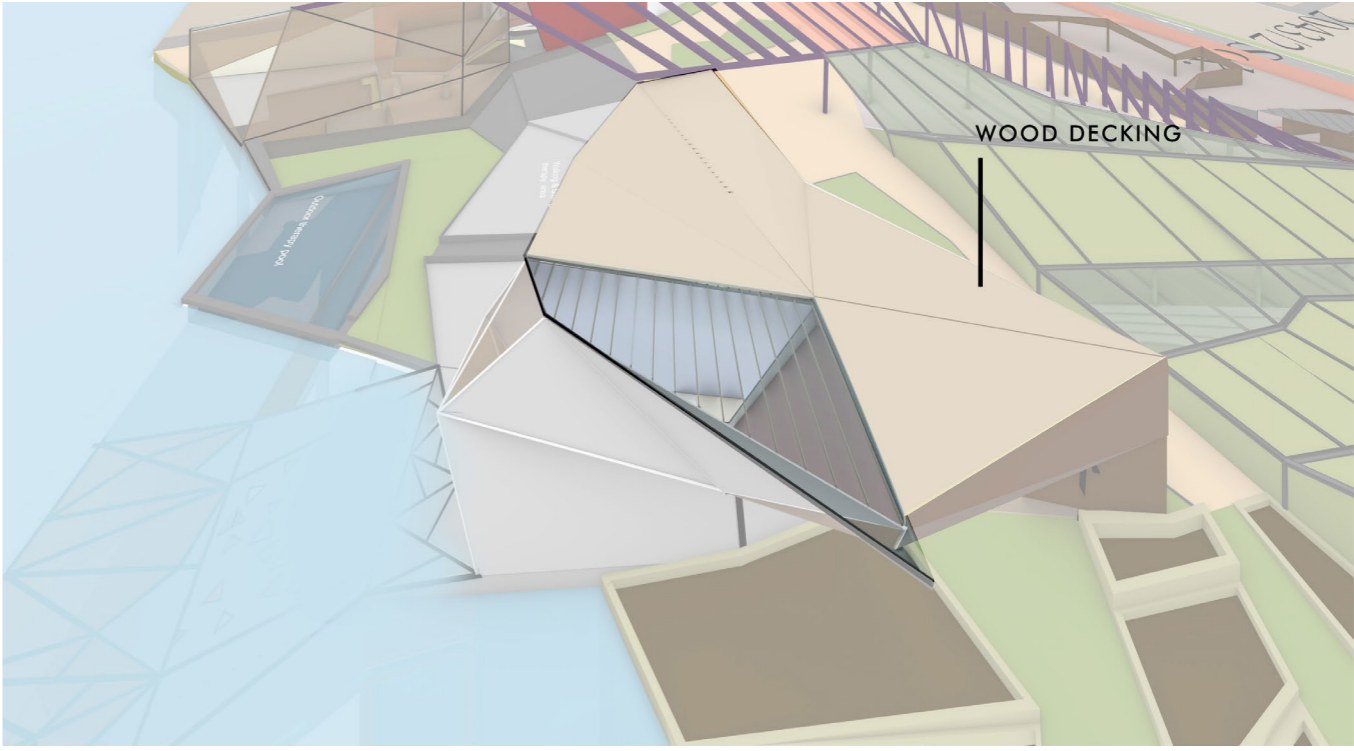
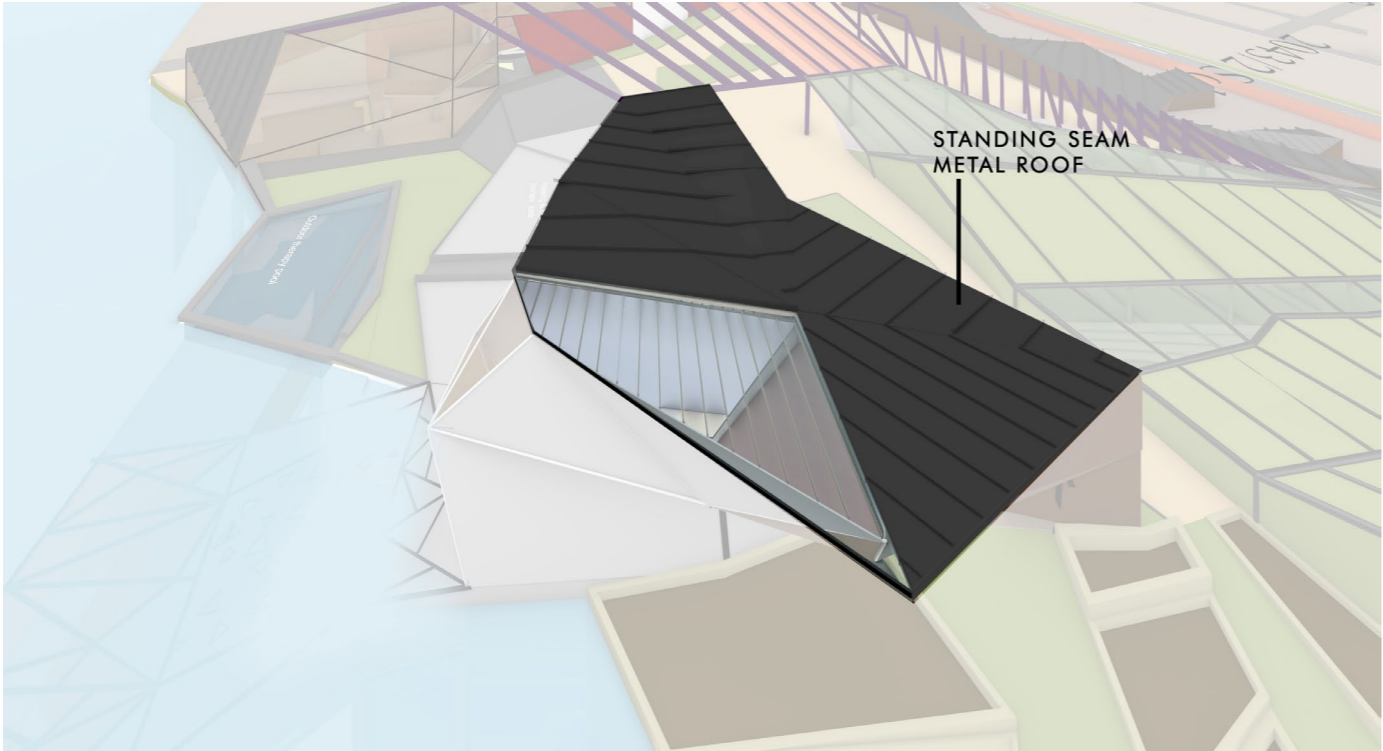


Greenhouse Structure

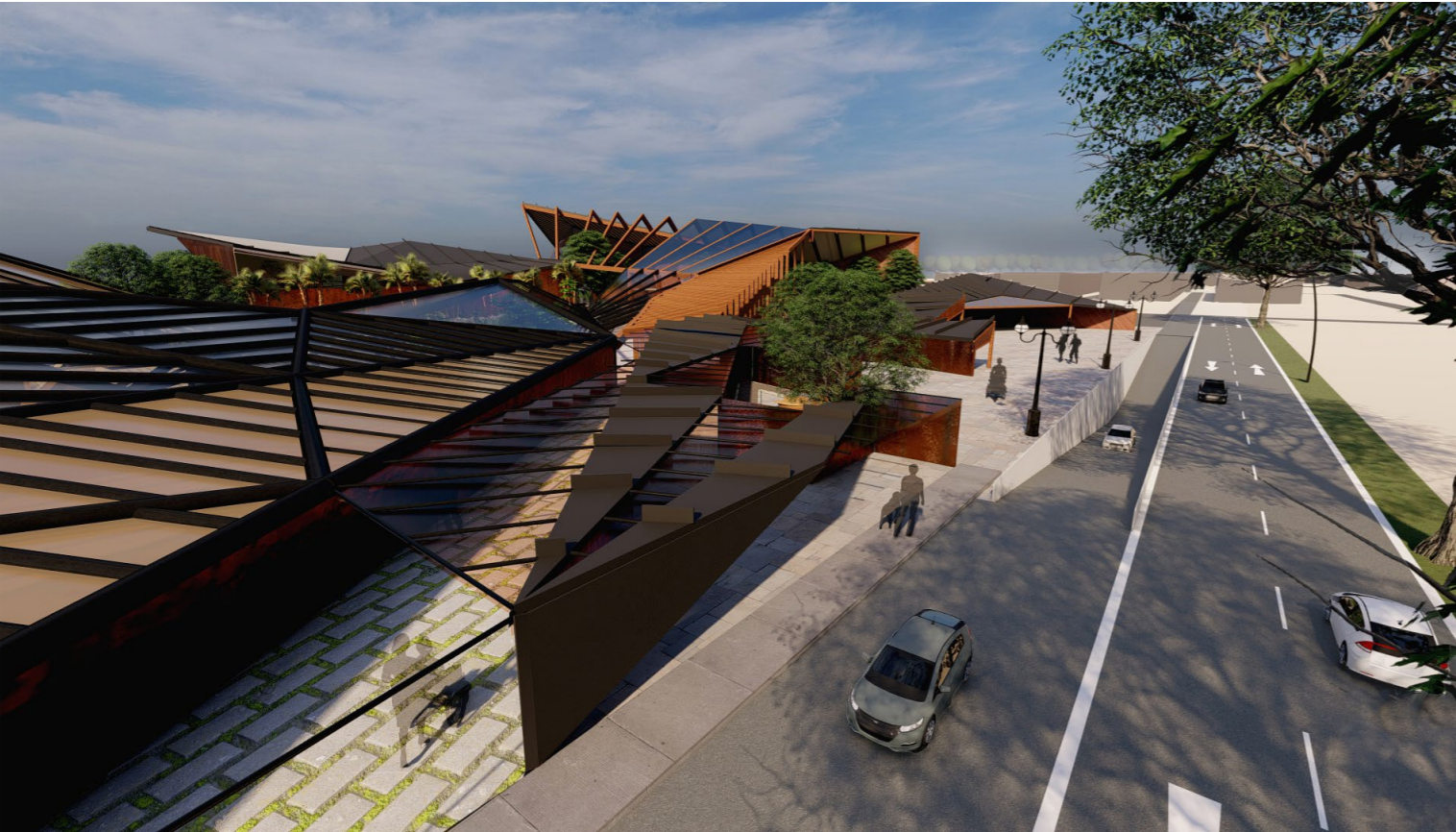


Structural Diagrams

Roof Structure



Exterior Perspectives

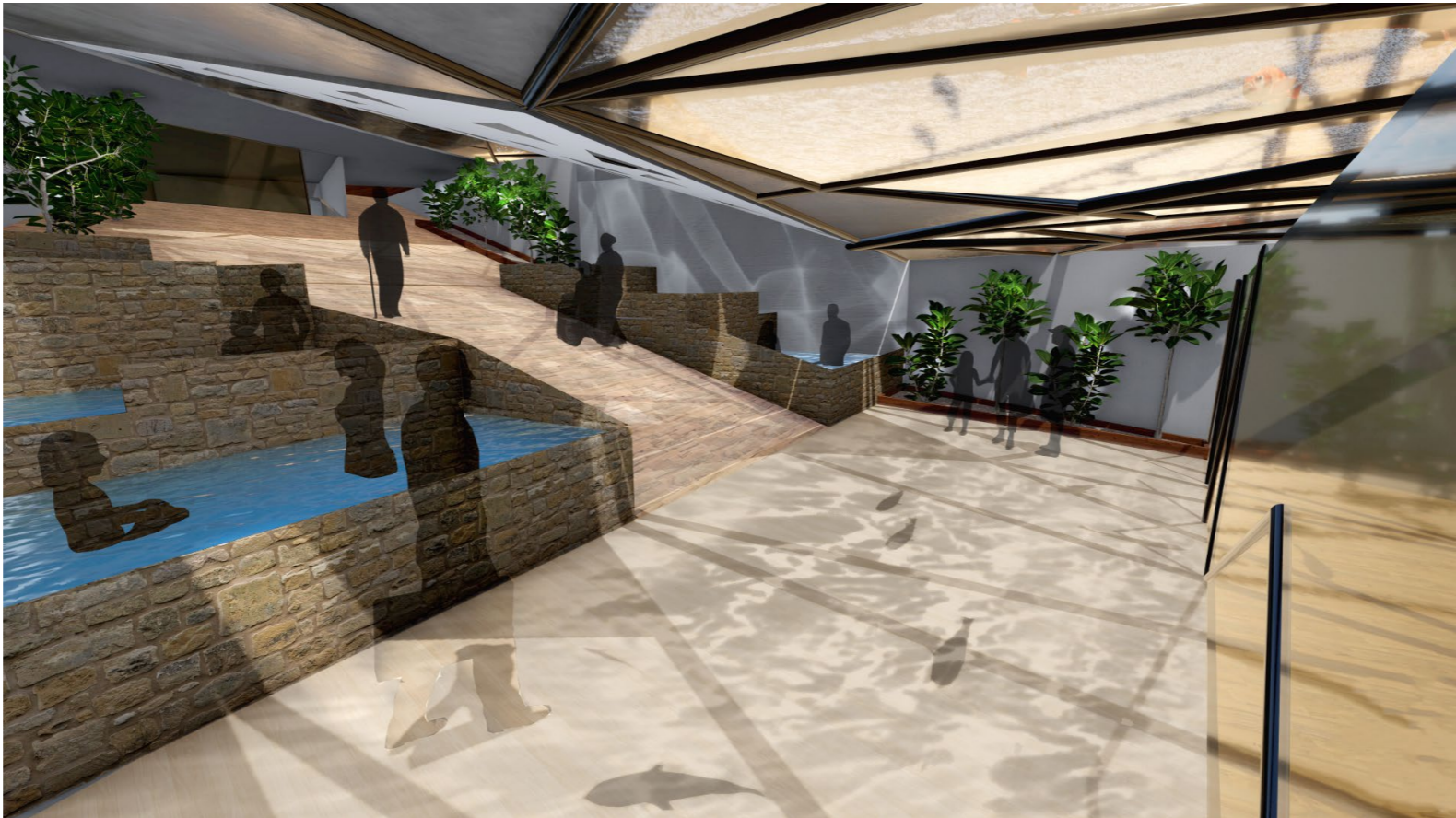
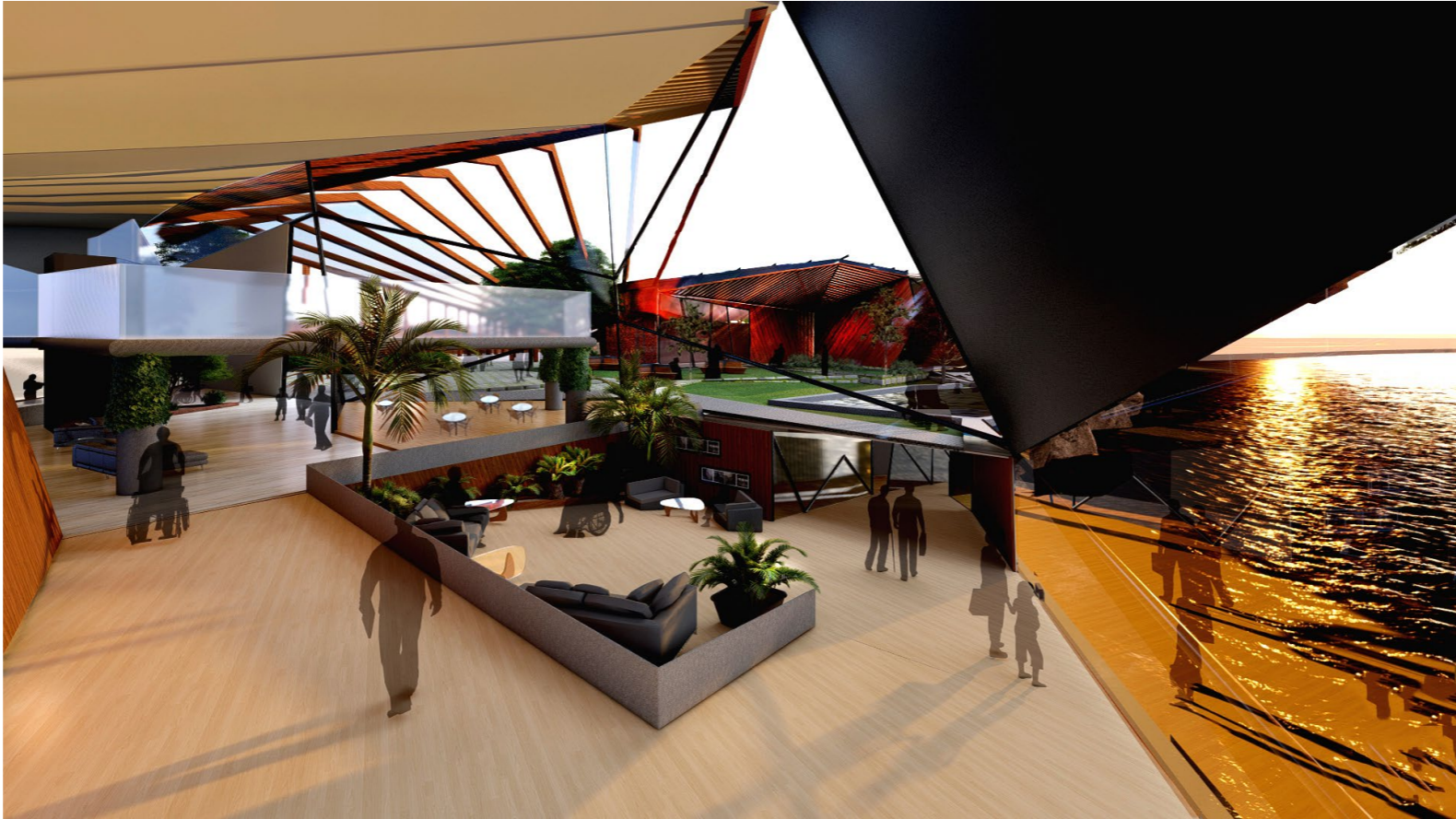


Scan or use the link for Project Video



<https://www.youtube.com/watch?v=GNs5CKEca-j0&feature=youtu.be>

Interior Perspectives



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Municipality of Karsiyaka, Izmir

