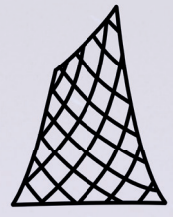




SAN JOSE - LANDMARK

NET GARDEN



Landmarks in all of human history served many purposes: orientation points, symbols of values, presenting wealth, showing technology and all of them became monuments close to people's hearts. From the classical world until now cities tried to create the highest, biggest, mostest landmarks to impress the world.

The Hanging Gardens of Babylon that were one of the seven wonders of the ancient world were a little bit of an exception. While of course displaying immense wealth and technical advancement, it was also a world wonder that focused on the visitor's experience when walking through the facility. Combining human technology, architecture and the beauty of nature, is the key element that separates the Hanging Gardens of Babylon from just being a giant sculpture or a building to become a memorable experience.



San Jose is a remarkable modern city. Thriving on technology development and improving everyday lives all over the world, makes it one of the most important places in modern history. But San Jose doesn't stop there. It is also the most ethnically diverse city in the USA with highly mixed neighborhoods instead of ghettos.

We identified diversity, communication and connectivity as leading values of San Jose.

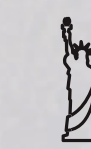
Our proposal the Net Garden wants to pay tribute to the technological as much as to the social achievements of the city.

The immense steel structure spans over the Guadalupe River, connecting the two sides, but more than that, creating an upgraded experience at the arena green. The landing zones of the bridge offer public spaces by creating hall and room-like areas, enclosed by the structure.

The structure is load-bearing while also having a hydroponics system integrated that lets plants grow from it. This system lets plants grow without the need of soil by pumping mineralized solution throughout the structure. One important part of Hydroponics is that you introduce a Mycorrhiza which is a network between plants and fungi. This symbiotic connection enables the plants to communicate with each other and support the entire network.

We believe that the Net Garden creates an architectural, conceptual and even microscopic scale a strong symbol of the values of San Jose.

LANDMARK CATEGORIES



SYMBOLIC MEANING

- Unity of the diverse Community
- Connection via Technology
- Exchange of Cultures



CITY SCALE FUNCTION

- Crossing the river diagonally
- Community Areas



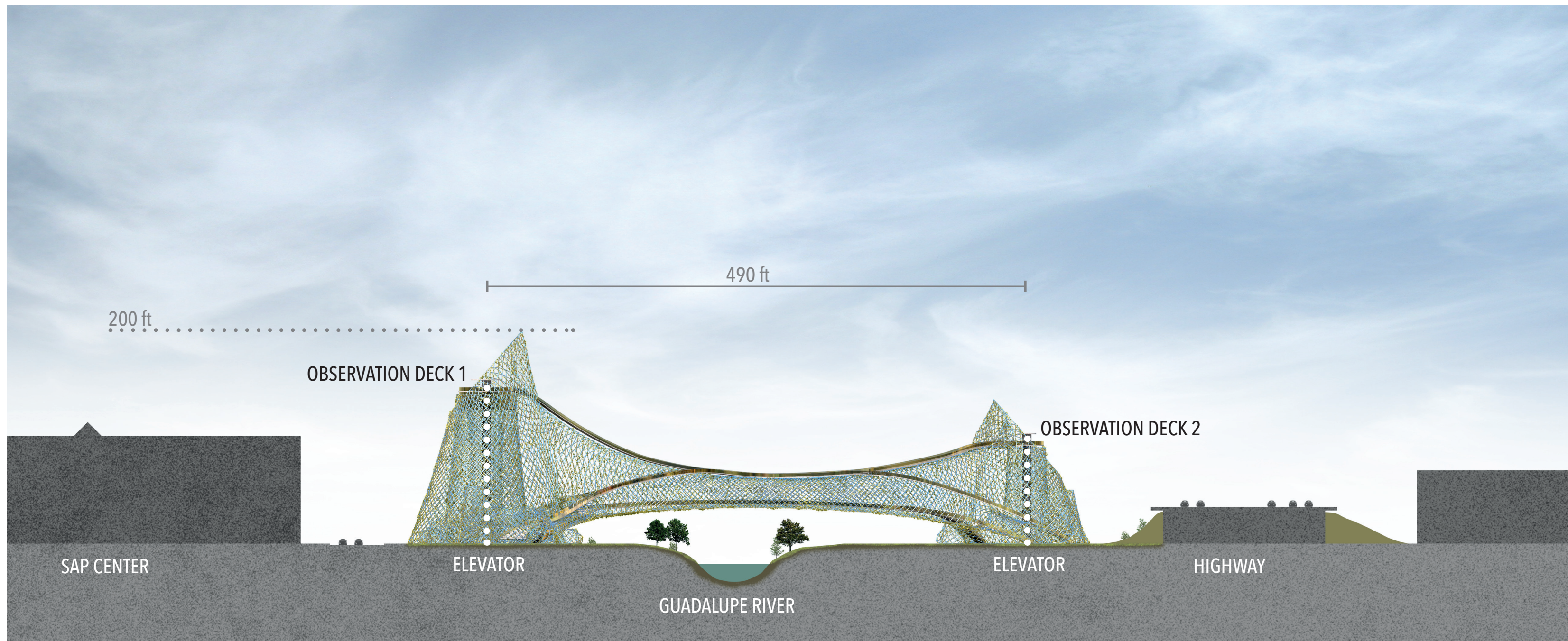
PIONEERING

- Challenging Construction Method
- Advanced Technology
- Research



FLEXIBILITY

- Memorable Night View
- Animated Illumination for different Occasions and Holidays



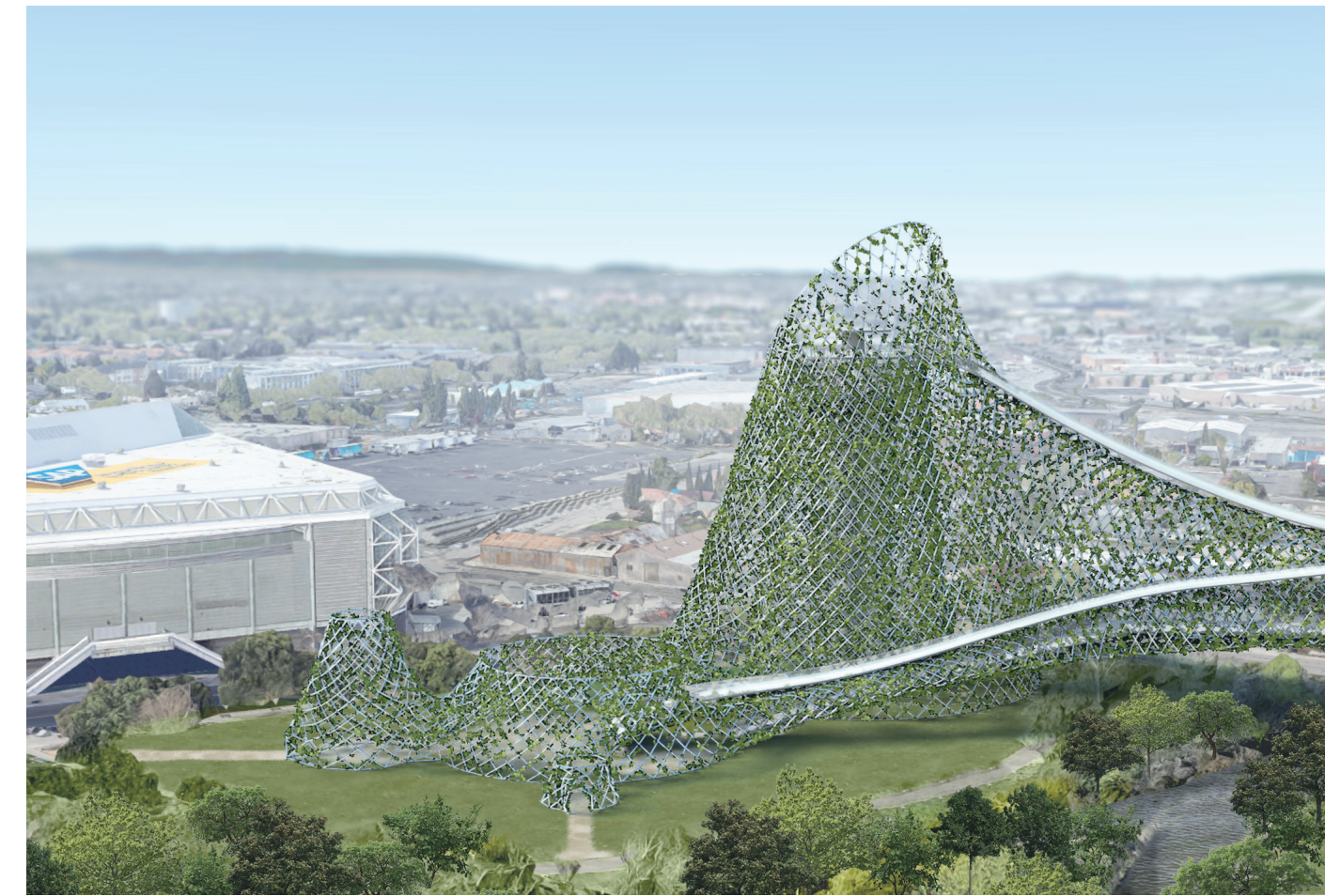
SECTION 1:1000



SITE PLAN 1:1000



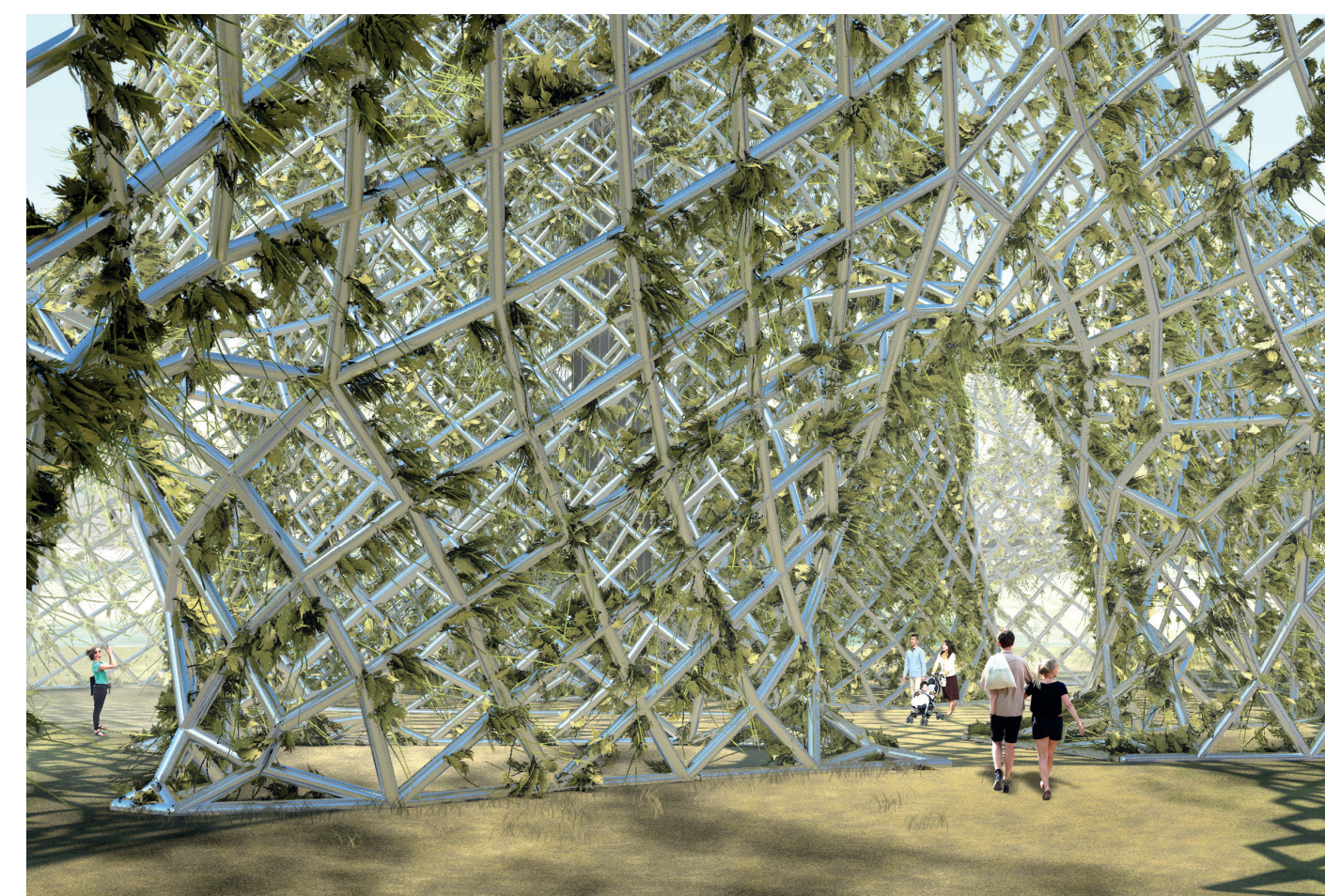
View from Observation Deck 1 to Downtown San Jose



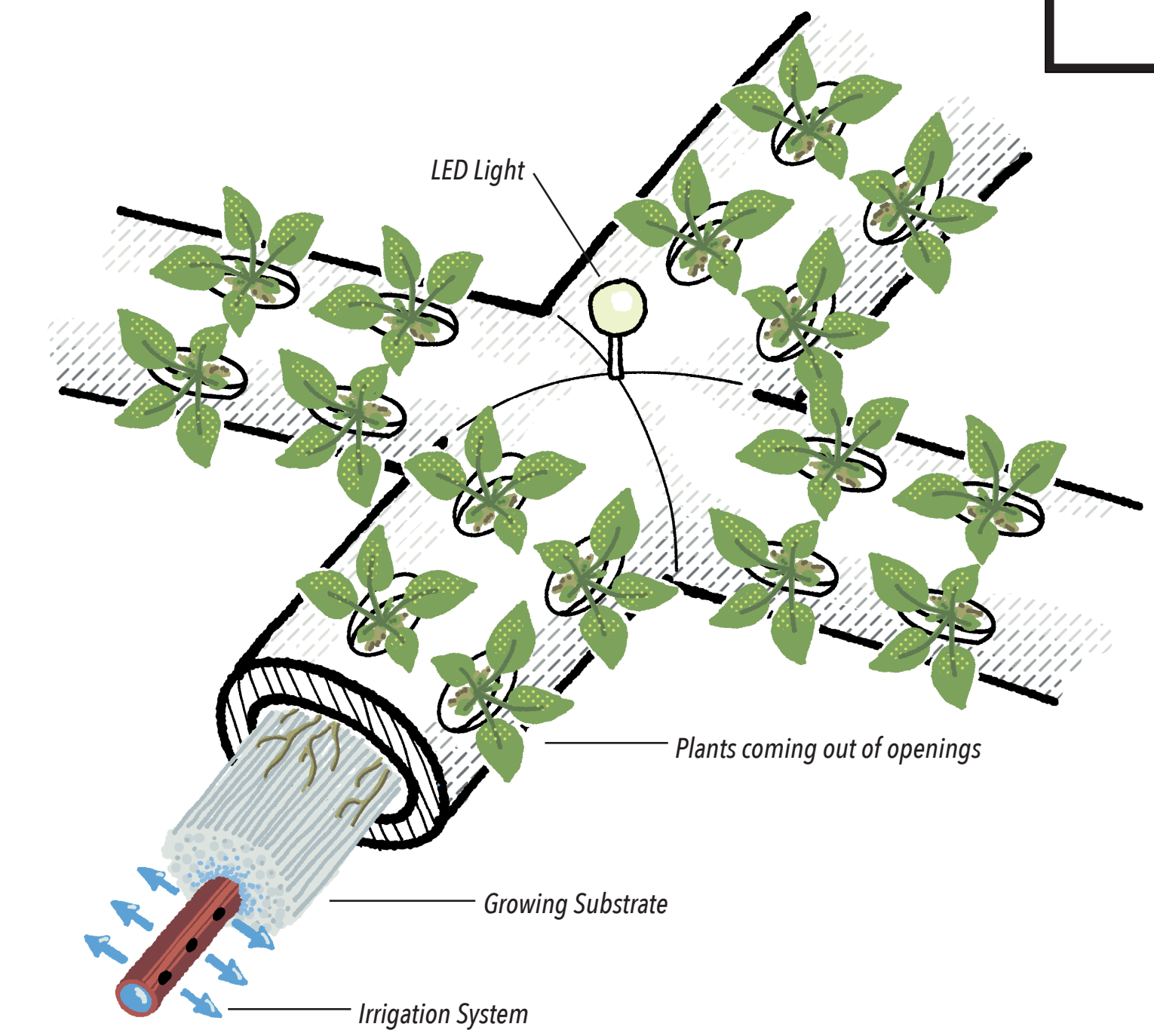
The Observation Deck 1 tower is more than double the height of the SAP Center



The bridge is double layered. Inside and outside have two different atmospheres



On ground floor the public space offers shade and is suitable for events



Structure and Hydroponics System

The structure consists of stainless steel pipes. The pipes have openings to let plants grow out and to make the over all structure lighter.

Inside the pipes is growing substrate that will give the plant's roots a base to cling to and also keep moisture and nutrients accessible to the plants. The substrate can be natural like coconut coir or expanded clay aggregate or a product like growstone made from glass waste. Within this substrate also happens the Mycorrhiza, the symbiotic connection between fungi and the plants. The advantage is that this connection can be maintained and optimized within the hydroponics system and the plants from the entire Net Garden can communicate and benefit from each other.

The irrigation system inside of the growing substrate delivers water mixed with nutrients. The mixture gets controlled in the laboratory under the first observation deck and can be adjusted to seasons and other circumstances.



Hydroponic System



Fungal mycelium

Lighting

For the lighting concept we got inspired by natural examples like a starry sky or fireflies. Rather than highlighting the structure with spotlights, the structure highlights itself with hundreds of small LED lights on each joint point of the structure. The number of lights offer an even lighting throughout the Net Garden, while not disrupting the wild life. This is achieved by:

- Using colored light at night with wavelengths in the green spectrum
- Having many dimmed small light sources instead of one strong one
- Changing the light intensity slowly over time in wavy patterns to protect animals from getting attracted to one light source

Another advantage of this system is the flexibility that comes with it. For special occasions the whole structure can be temporary illuminated in certain colors.

Future Challenges

We are looking forward to develop this project in detail and collaborate with experts from different fields

- Efficient structure system with joint points that can be used throughout the structure
- Finding plant types that work in this ecosystem
- Developing the hydroponics system in detail