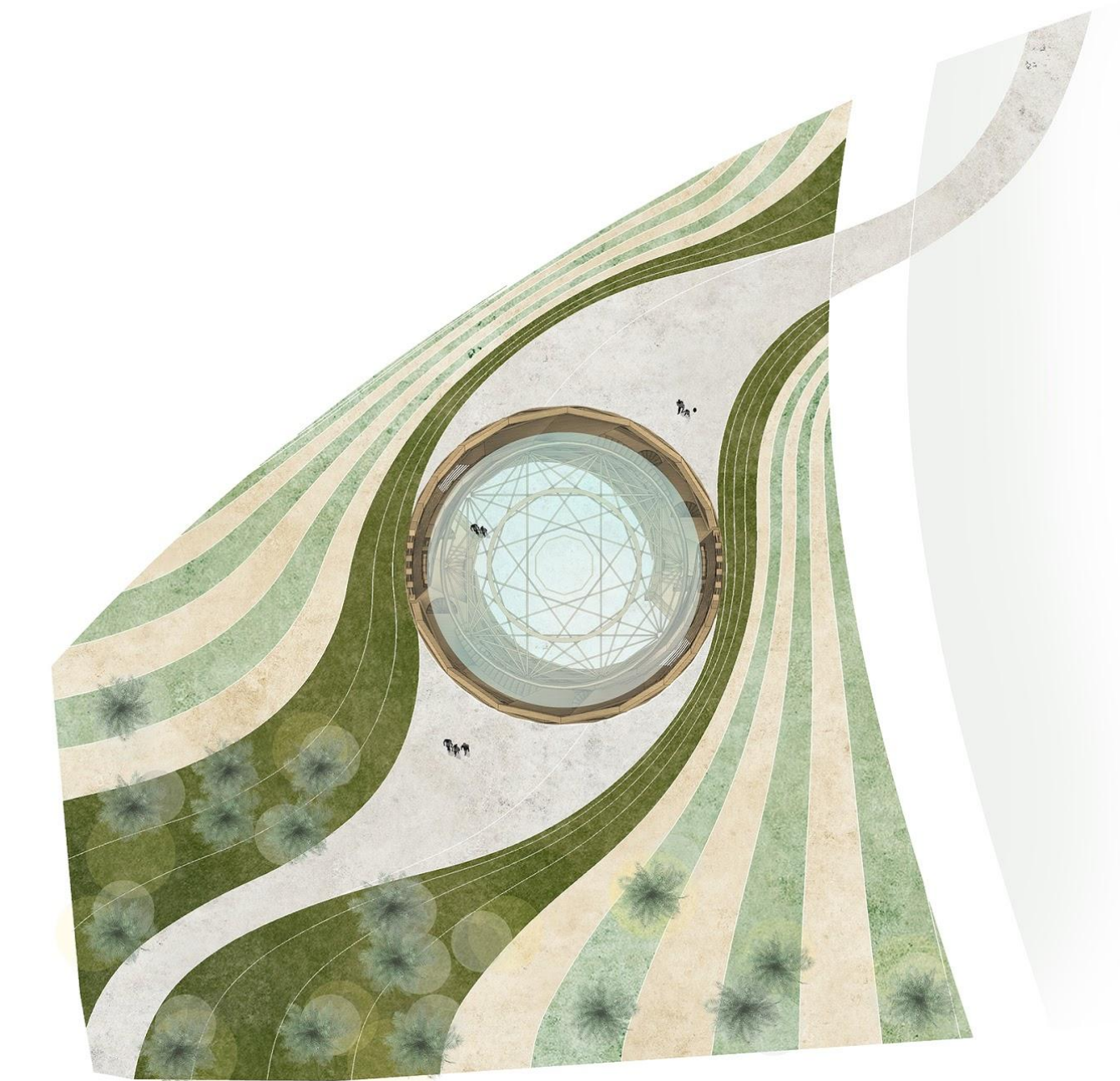


TOWER OF GAIA

Towers have too often become symbols of power and ego. We would like to reveal a new kind of icon expressing the fragile balance and interconnected nature of our world. A symbol of love and of peaceful duality in California, a state that fostered an entire generation around a peaceful movement singing **“The times they are a changin’”**. This project is a homage to the Eiffel Tower, but with a Silicon Valley Twist:

A digitally generated timber tower swirling into the sky, celebrating the environmental technology of our age.

The Tower of Gaia will have a unique self-sufficient restaurant providing a panoramic view of the Silicon Valley. It will serve **organic food that grows within the structure itself**. This rich flora will form an educational journey that the public will be able to experience whilst going up the platforms through an intricate staircase or an exciting lift following the curvature of the building itself.



Steps towards Net Zero Carbon: **Based on Green Building Council Net Zero Guidelines**



Interactive energy generation display:

1. The output from the wind turbine will vary the brightness of an LED system to represent the amount of energy produced at any given time.
2. General lighting will be fed from the renewable energy source.



Humidity collection:

1. Using biomimicry principles, humidity contained within the air can be condensed and treated for irrigation, WC flushing and kitchen use.
2. When the cooling system is operational, any resulting condensation from the equipment will be collected for use in other services



Rainwater collection:

1. Any water resulting from periods of rain will be driven down the structure and collected at the base for irrigation, WC flushing and kitchen use.
2. Water collected within the landscaping will also be collected, treated and stored for future use.



Net zero construction-Reduce construction impacts:

1. FSC wood will be sourced from the nearest farm and deployed for the construction of the structure. The project aims to eliminate the use of uncontrolled timber.
2. Whole building carbon life cycle will be assessed and will target a negative impact.
3. A carbon strategy will be put forward to minimise waste during construction. This is achievable by designing the structure and its elements to be fabricated in a factory environment and brought to site for construction in a modular fashion, both reducing waste and construction program.



Reduce operational energy:

1. The restaurant will mainly rely on natural ventilation for a comfortable environment and reduction of operational energy. An active system will only take over once internal conditions cannot be met and will integrate high efficiency and simple equipment. (Ceiling Fans, heat recovery ventilation systems)
2. An energy metering strategy will be implemented to actively track the operational carbon vs renewable energy supply by the wind turbine. Data will be publicly available and displayed in the restaurant, for guests to interact and learn with it.
3. External shading elements will be integrated into the restaurant facade to block the cooling load before they enter the space an



Increase renewable energy supply:

1. Vertical wind turbines operate at low wind velocity, generate little noise and are harmless towards birds. It's main components are at the base making maintenance accessible from the main restaurant.
2. Storage will use a potential energy and gravity driven system to eliminate the need for batteries, thus reduce the carbon footprint.



Regenerative Food Supply:

1. A vertical hydroponics system installed within the tower will provide a farm to table experience whilst eliminating food waste.

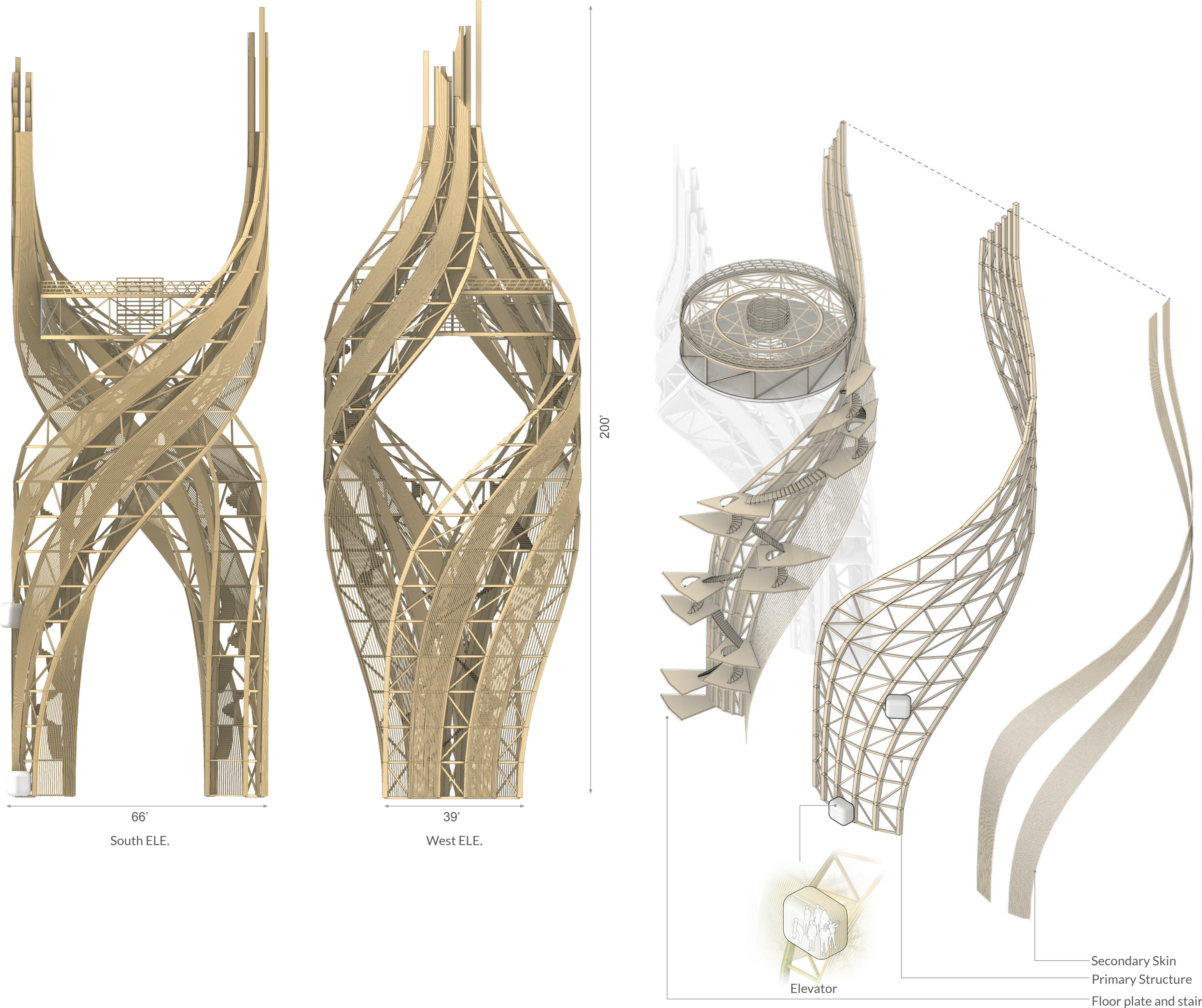


TOWER OF GAIA

The tower of Gaia is **an exemplary beacon of net zero carbon design**. Throughout the building life cycle and waste management during construction up to operation, **Gaia will adopt a regenerative approach**. The tower will deploy active systems that sequester carbon during its operation to offset its own embodied carbon and generate enough energy to operate and store for a vertical hydroponics farm targeting beyond zero carbon.

One of Gaia's side elevations, resembling to an X Chromosome, which is found in many organisms, both male and female. Chromosomes are the molecules defining DNA, **the blueprint of all living species**. An icon must speak to all of us, in an inclusive way. It cannot favour one organism over another. It must unite.

The Internet has helped connecting people worldwide, and has made technology empowering and democratic. Isaac Azimov and James Lovelock envisaged "Gaia" as the ideal planetary state, in which all beings would connect into one, in the spirit of Buckminster Fuller's Operating Manual for Spaceship Earth. The Tower of Gaia will help us remember: **we're all in this together**.



Secondary Skin
Primary Structure
Floor plate and staircase