

*Honorable Mention*

# The Wind Tower

Submitted by:

Richard Moreta of Richard Moreta Architecture  
And John Naranjo of MRA Design



ENVISION GREEN HOTEL



## RADICAL INNOVATION

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# RADICAL INNOVATION

NARRATIVE

## DESIGN-TECHNICAL NARRATIVE

The Wind Tower is destined to become the most recognizable landmarks on whatever of the city could be located. But what is most remarkable about in the design, which goes hand-in-hand with a far-reaching commitment to energy-efficiency. Through the use of artful design and some smart technology, The Wind tower will offer both intensive functions and an attractive natural environment...and it's all expected to consume less energy than a comparable conventional hotel building. In short, The Wind tower envisions as design development that exists in harmony with the natural environment.

## VERTICAL MASTER PLANNING

The Wind Tower complex responds to the urgent need to remedy the ecological and social challenges caused by uncontrolled sprawl in the cities. The Wind tower proposes that a viable alternative is to go up...that is, to build in such a way as to minimize the "footprint" of our human-made environments while we maximize the sense of openness and close proximity to our natural surroundings. Given the technology and know-how we now have in the construction of large, tall structures that is not beyond our means.

Extreme vertical structures such as The Wind tower offer the opportunity to bring nature upward within a reduced architectural footprint in order to preserve the natural surroundings at ground level while adding other natural elements within a controlled vertical environment. The structure itself acts like a living organism with its wind and atmospheric energy conversion systems and photovoltaic exterior sheathing that allow natural air into the interior without mechanical intervention. The lobular arch shape of The Wind Tower meanwhile can easily dispel loads from top to bottom. The design offers the stability and aerodynamic properties necessary for structures of such heights.

Gardens are situated on the podium and at ground level and transition floors at the tower can be thought of as an upward extension of the earth, complete with layers of growing vegetation. Large bodies of water are placed at various levels in, on, and around the podiums and serve multiple functions: as fire barriers and fire sprinkler system reservoirs, as recycled water catch basins, as recreational lakes, rivers, waterfalls and streams, and as decorative aquatic features. The top decks of the podiums have a strong emphasis on open garden balconies and expansive park areas. At the forest levels, biological technology plants use sunlight to break down human waste and compost for recycling back into the soil. The podiums are like great expanses of natural land turned upward with ten large forest, lake and stream sanctuaries brought up into the sky. Ground level and deck-top pedestrian walkways are easily accessible from any area and skyway pedestrian bridges connect the buildings at the tops of the podiums.

## ECO-DESIGN

Most people are used to thinking of large buildings as vast, energy-consuming machines. Therefore, making buildings more energy-efficient could have a significant impact on energy policy. That is a key goal of the "green architecture" movement, which is changing the way buildings are designed, built and run. In the case of large commercial and office structures, the combination of green design techniques and clever technology can not only reduce energy consumption and environmental impact, but also reduce running costs, create a more pleasant living, recreation, and working environment, improve peoples' health and productivity, reduce legal liability, and boost property values and rental returns.

That's why The Wind Tower complex to be as much an ecosystems design as an architectural habitation design. The structures provide a basis for architectural development upon which ecological diversity can flourish. For The Wind Tower feature resource-conserving technologies

## ECO-DESIGN (Cont.)

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such as the use of recycled building materials and nature-based water cleansing systems for all buildings. The plan also includes the use of plant- and water-based ecosystems. Like other green buildings, The Wind tower will rely on natural light and ventilation, and energy-efficient lighting.

Construction materials will include high-strength steel, high-strength concrete, stainless steel panels, anodized aluminum, acrylic, patina copper, self-shading glass, composite ceramics, and tempered glass. Special window glass will allow daylight in to reduce the need for interior lighting, keeping heat and ultraviolet rays out, and minimizing heat loss in the morning and night. Most people are used to thinking of large buildings as vast, energy-consuming machines.

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Everything in the buildings will be hydrogen gas, solar/electric or hydro-powered. Plants and trees will play a major role in regulating the heating and cooling. Aside from personal vehicles entering and exiting the parking facilities, no internal combustion engines or toxic pollutants will exist within the confines of The Wind Tower complex. A pool of photovoltaic panels on the buildings' uppermost levels will provide enough kilowatts of electricity to reduce the buildings expected demand. Inside the buildings, motion sensors will control fans and automatically switch off lights in seldom-occupied areas such as stairwells. The result: the energy consumption of The Wind Tower building will be lower than that of comparable conventional buildings.

The interior eco-design is established by the building's ecological basics. One of the main design attributes is to reduce interior/building materials and waste. Rooms are designed on a 4'foot multiple to conform to standard-sized materials: recycled solid surface materials, glass, and flooring. Another aspect is installed high-efficiency lighting (LED) system with advanced lighting control and high-efficient plumbing systems and fixtures. Low flow showers, dual-flush toilets, and the use of recycled/ recovered rainwater for toilet flushing and irrigation. The rooms will incorporate waste collection units that are connected to a centralized building system. The interiors will also provide modern design and friendly technology- mood pad control unit per room will allow guest to control lighting and to select images from image library that will reflect behind glass walls and ceilings. The interior material and furnishing will also have sustainable attributes, recycled content, zero off gassing of harmful air emissions, zero toxicity, use of sustainable harvested materials, highly recyclable, durability, longevity, and local production. To help meet the development's ecological requirements, The Wind Tower plan preserves the beauty of nature by condensing the environments of living, working, commerce and industry into an upwardly-directed architectural structure. Multi-storied gardens are to be infused with architectural components. The presence of natural sunlight, fresh air, breeze and panoramic views are to be of primary importance. Ease and quickness of vertical transportation (*via elevators*) and laterally (*walkway*) are also crucial.

## OVERVIEW

A comprehensive environment is constructed with a global outlook that can help alleviate land problems and preserve the natural environment. In The Wind Tower, people exist in harmony with the natural environment. The city can accommodate residents and workers alike. Thus, the workplace can truly be close to home.

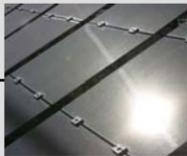
At its highest point, the complex will represent the new icon for whatever of the urban context will be located. Part of its allure will be the color-shifting properties of the towers at night—a visually striking form of architectural illumination made possible through the use of LED panel curtain walls. The technology can also be used to turn the three towers after dark into enormous clocks, with transitions in the color patterns indicating the progression of time throughout the evening hours. Each hour would be represented by a different color, and every fifteen minutes the LED Panels will change into the representative color of the next hour, from the top floors to the bottom.

The structure is a new type of design concept offering intensive functions that exist in harmony with the natural environment and acts like a living organism.



# SUSTAINABLE DESIGN

OBJECTIVES: TO CREATE A BUILDING / STRUCTURE LIKE A LIVING ORGANISM



**PHOTOVOLTAIC EXTERIOR SHEATHING:**  
FLAT /CURVED PANELS CELLS GENERATE ENERGY FROM SOLAR RADIATION



**MICRO-CLIMATE**  
LANDSCAPE FILTERS, CONDITIONS, AND COOLS



**WIND AND ATMOSPHERIC ENERGY CONVERSION SYSTEMS**  
TURBINE-GENERATOR-POWER



**RECYCLED WATER**  
GARDENS ARE SITUATED ON PODIUM, GROUND, BELOW ROOF, AND TRANSITION FLOORS. WATER RESERVOIRS, WATER CATCH BASINS, AND PONDS ARE USED AS DECORATIVE AQUATIC FEATURES

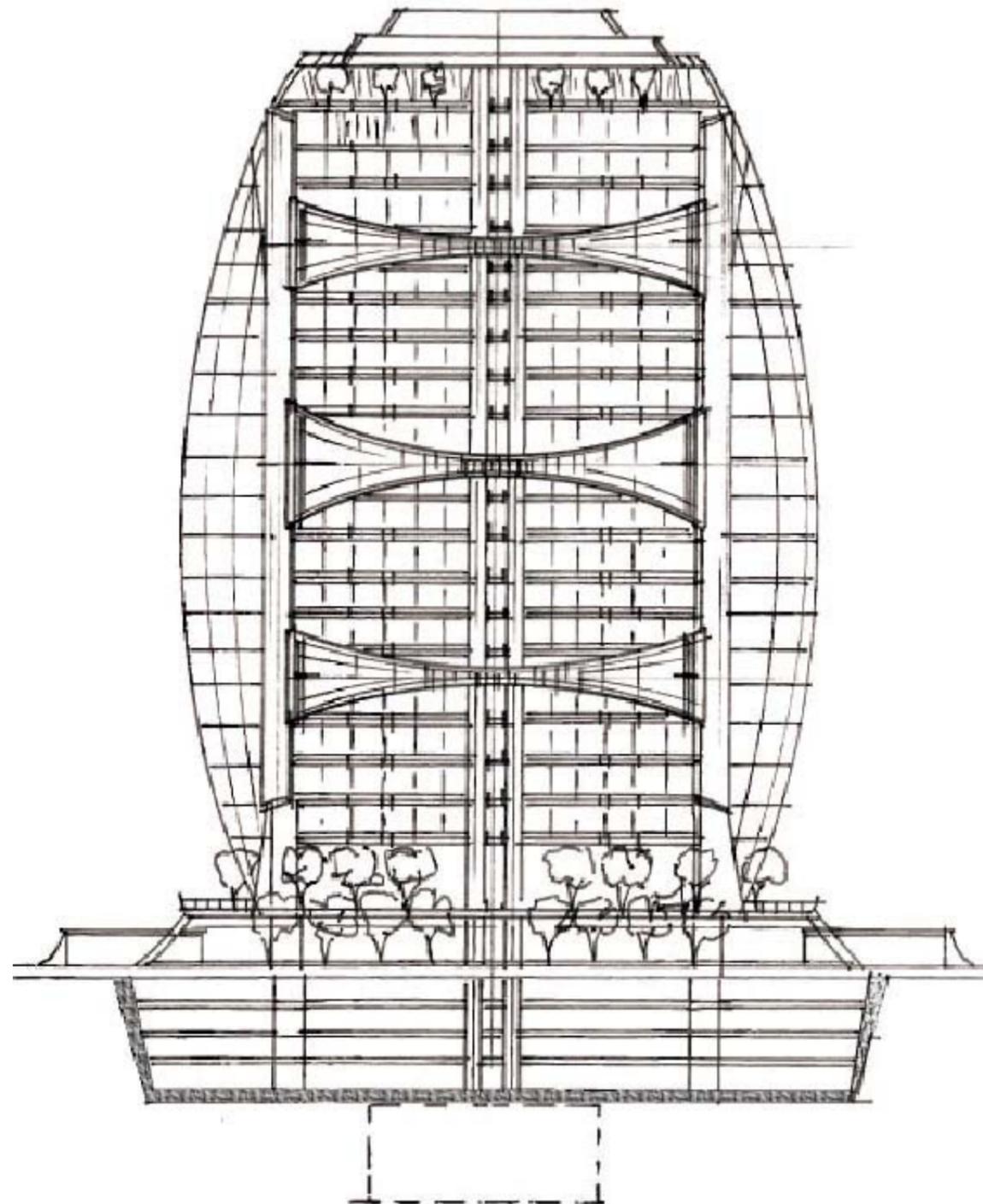
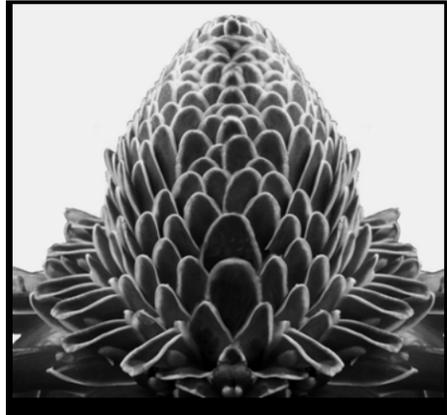


**BIO FUELS**  
RENEWABLE ENERGY SOURCES SUCH AS VEGETABLE OILS



**ENERGY CENTER (BELOW GROUND)**  
POWER FROM TURBINE HEATS BOILER AND CREATES STEAM FOR CHILLER WATER PLANT TO GENERATE COOLING/HEATING

# CONCEPT



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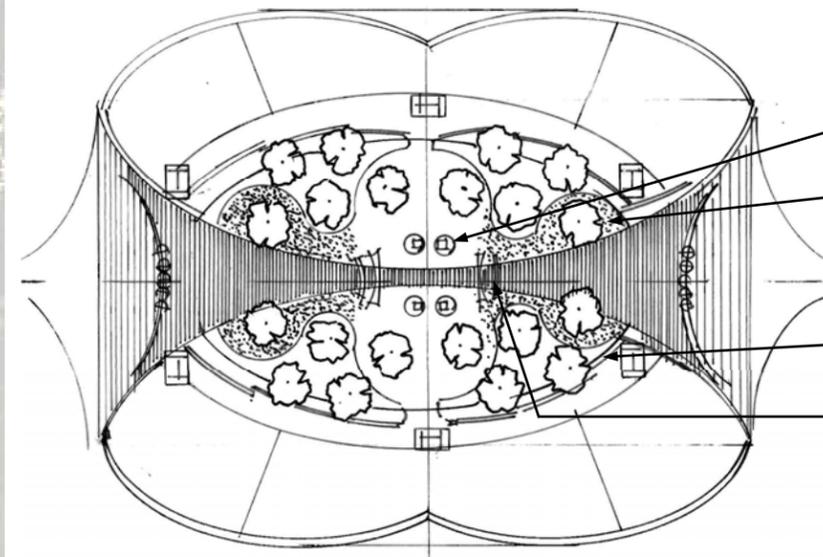
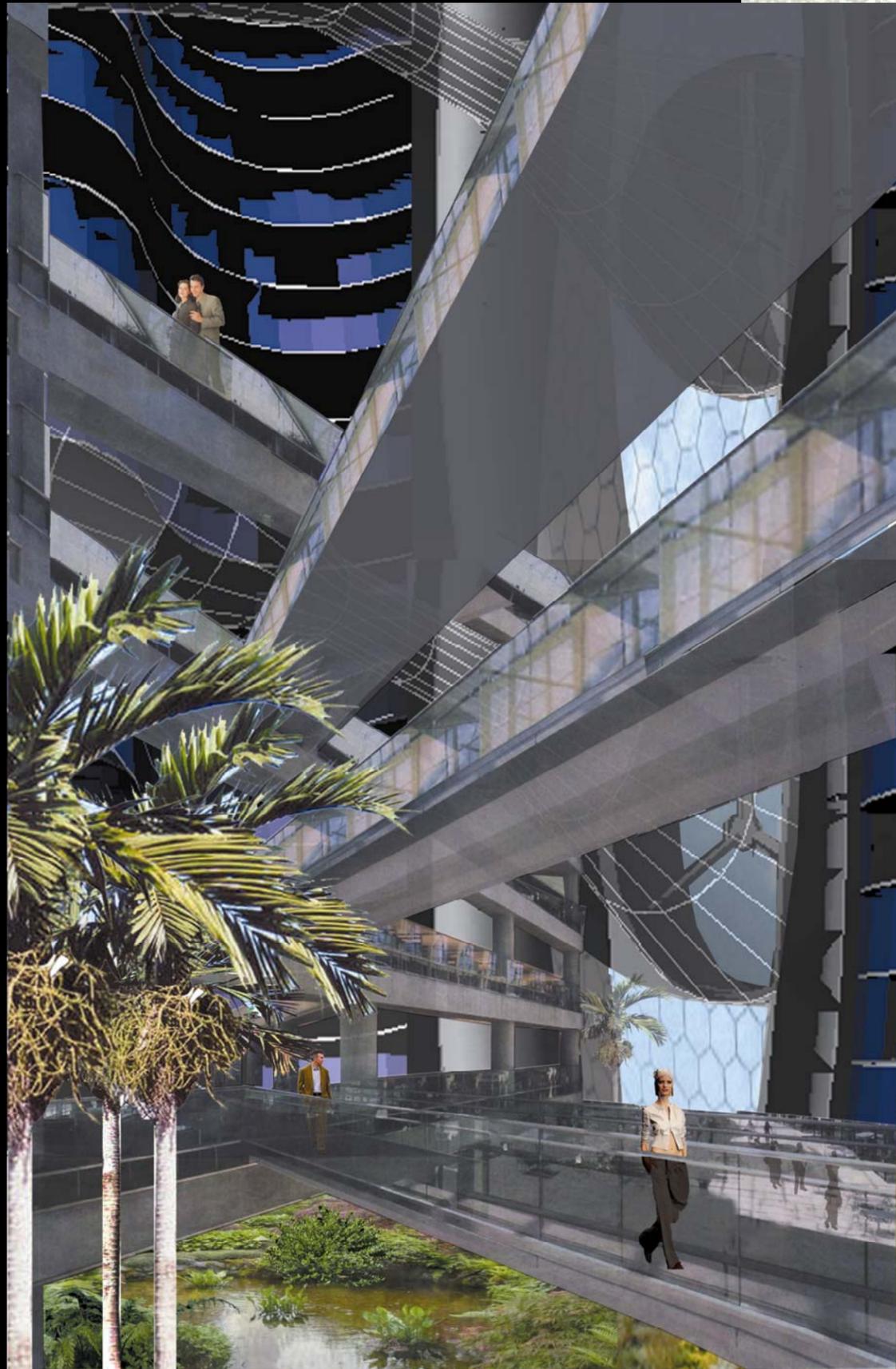
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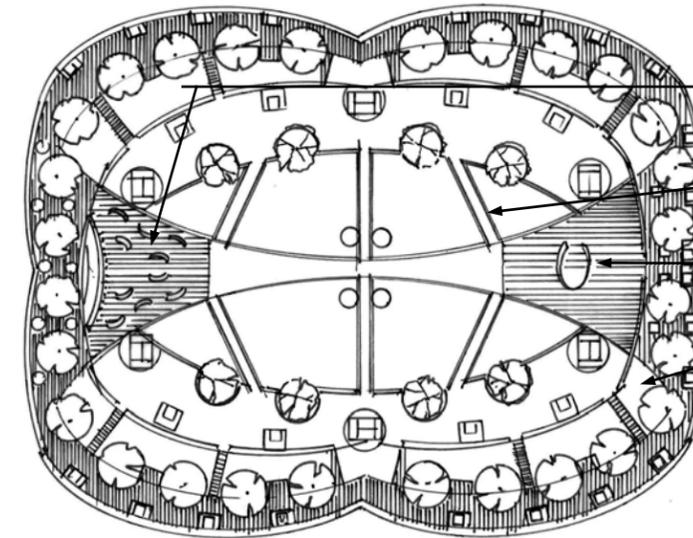
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# FLOOR PLANS



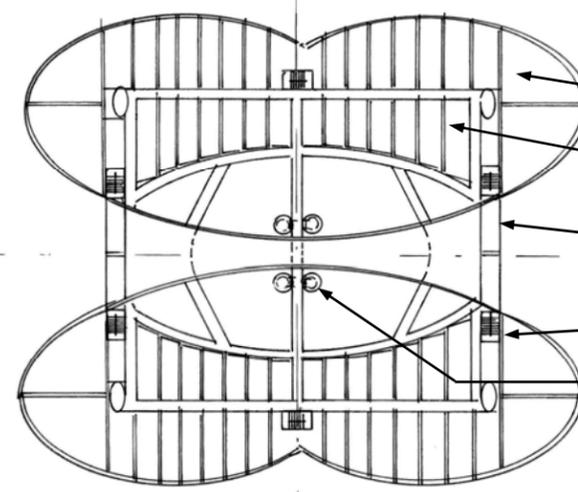
**GROUND LEVEL**

- ELEVATOR CORE
- RIVER ROCK GROUND COVER
- MAIN ENTRANCE
- WATER PONDS AT PERIMETER
- CONCIERGE COUNTERS



**2ND LEVEL**

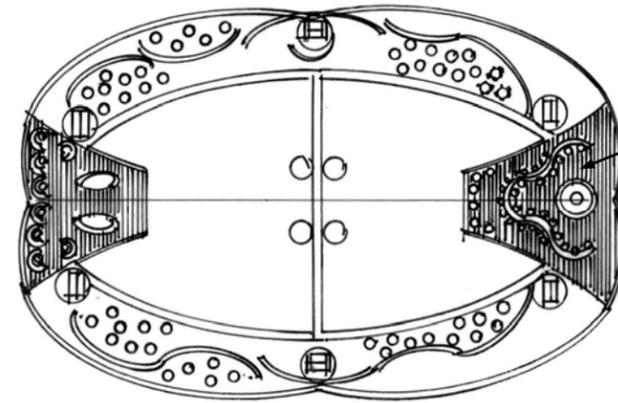
- LOUNGE BAR
- BRIDGE WALKWAYS
- CHECK-IN RECEPTION COUNTER
- GARDEN PODIUM WITH PERIMETER PONDS FOR RECYCLED WATER BASINS



**MAIN LEVEL (FLOORS 3 THROUGH 19)**

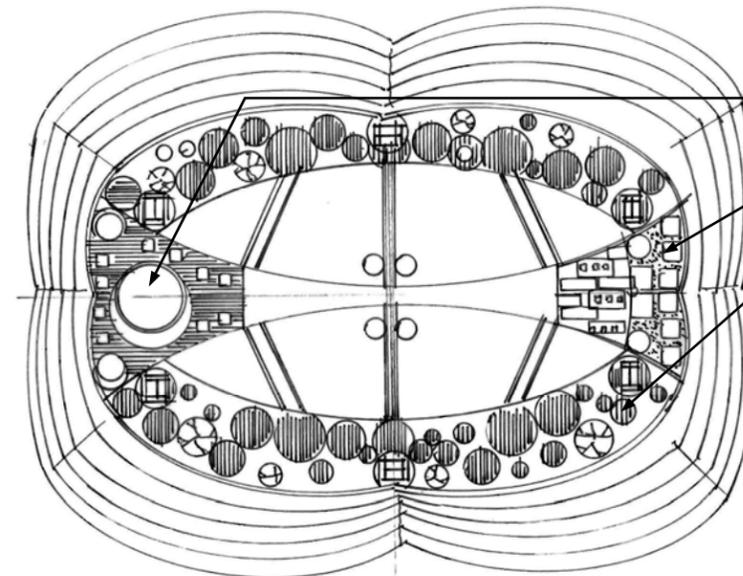
- SUITES
- GUEST ROOM
- TURBINES
- STAIRS
- ELEVATOR CORE

# FLOOR PLANS



RESTAURANT / BAR & LOUNGES

20st LEVEL

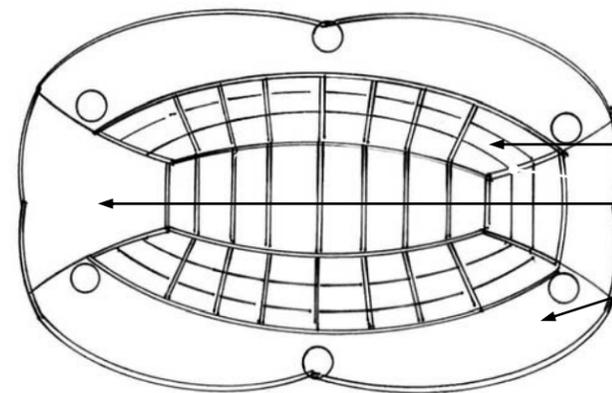


POOL AND OPEN SUN DECK

SPA AND GYM

WATER LILY POND AND GARDEN

21st LEVEL

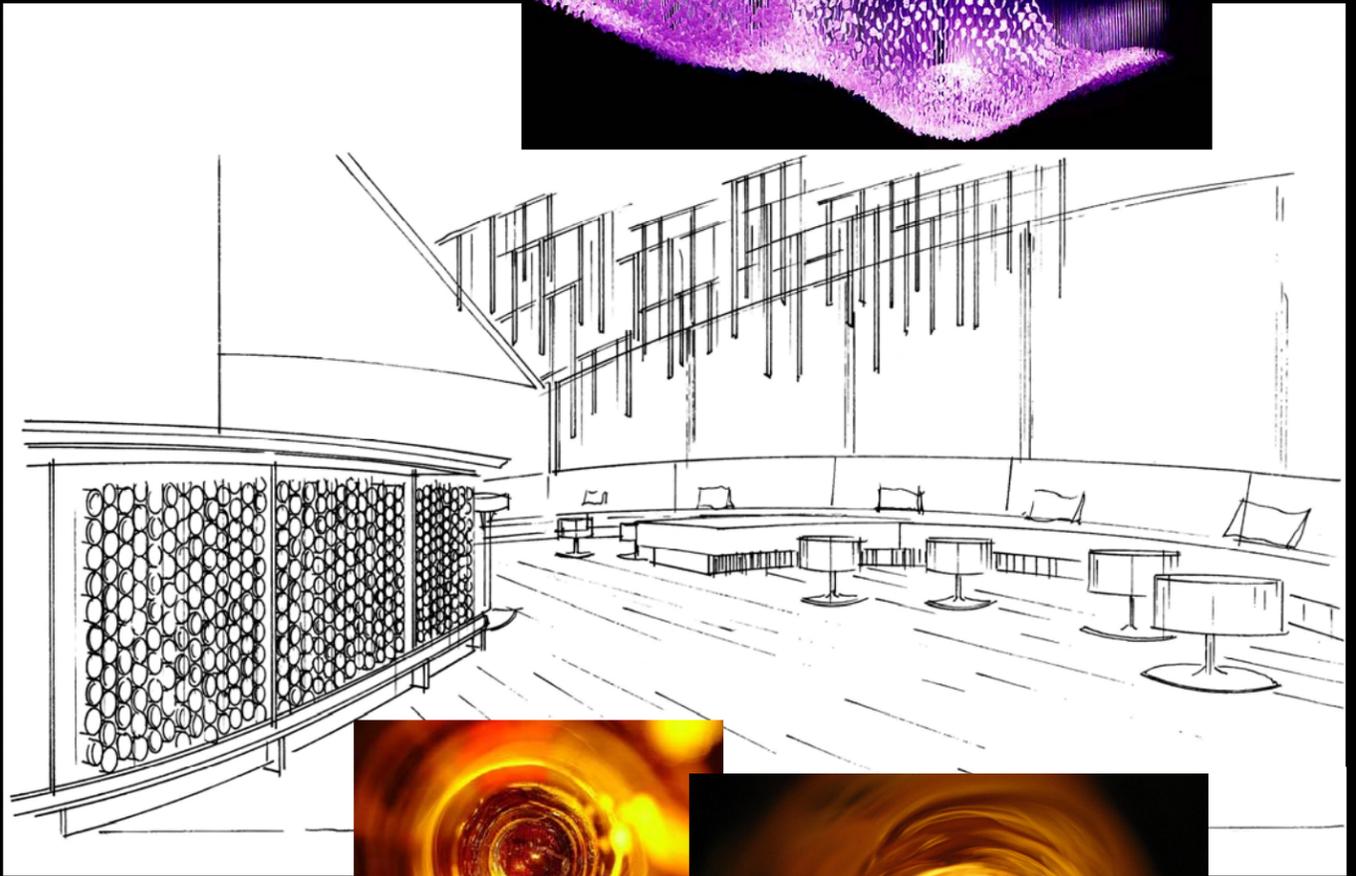
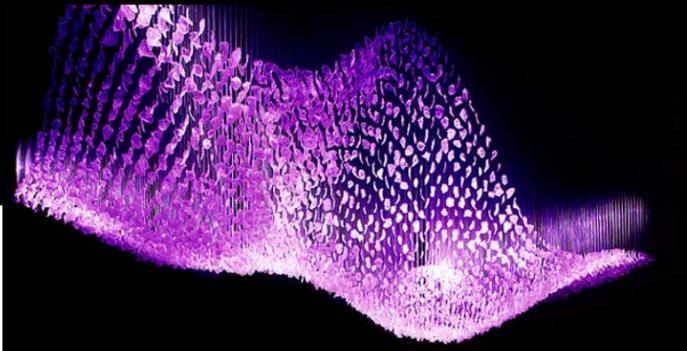


PHOTOVOLTAIC PANELS

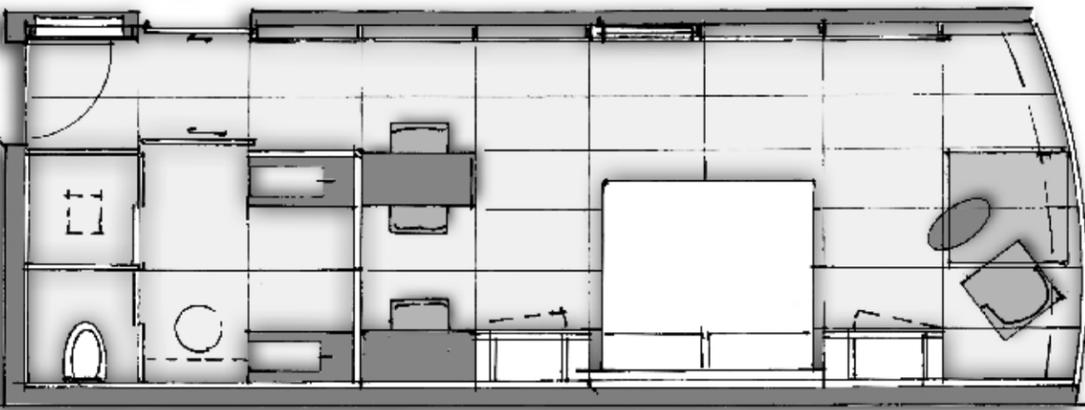
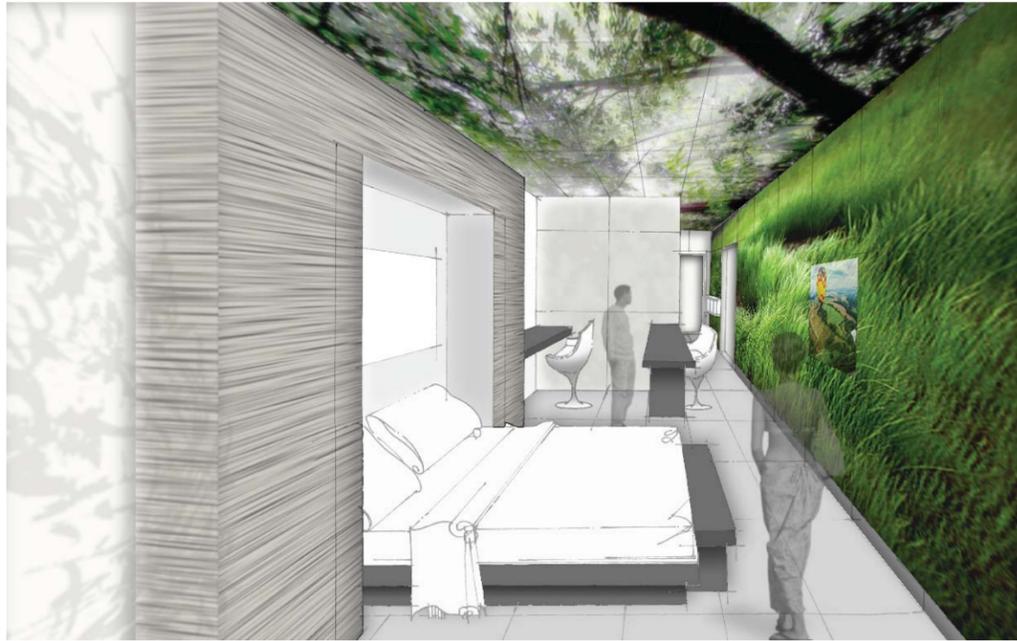
OPEN TO SUN DECK

OPEN TO POND BELOW

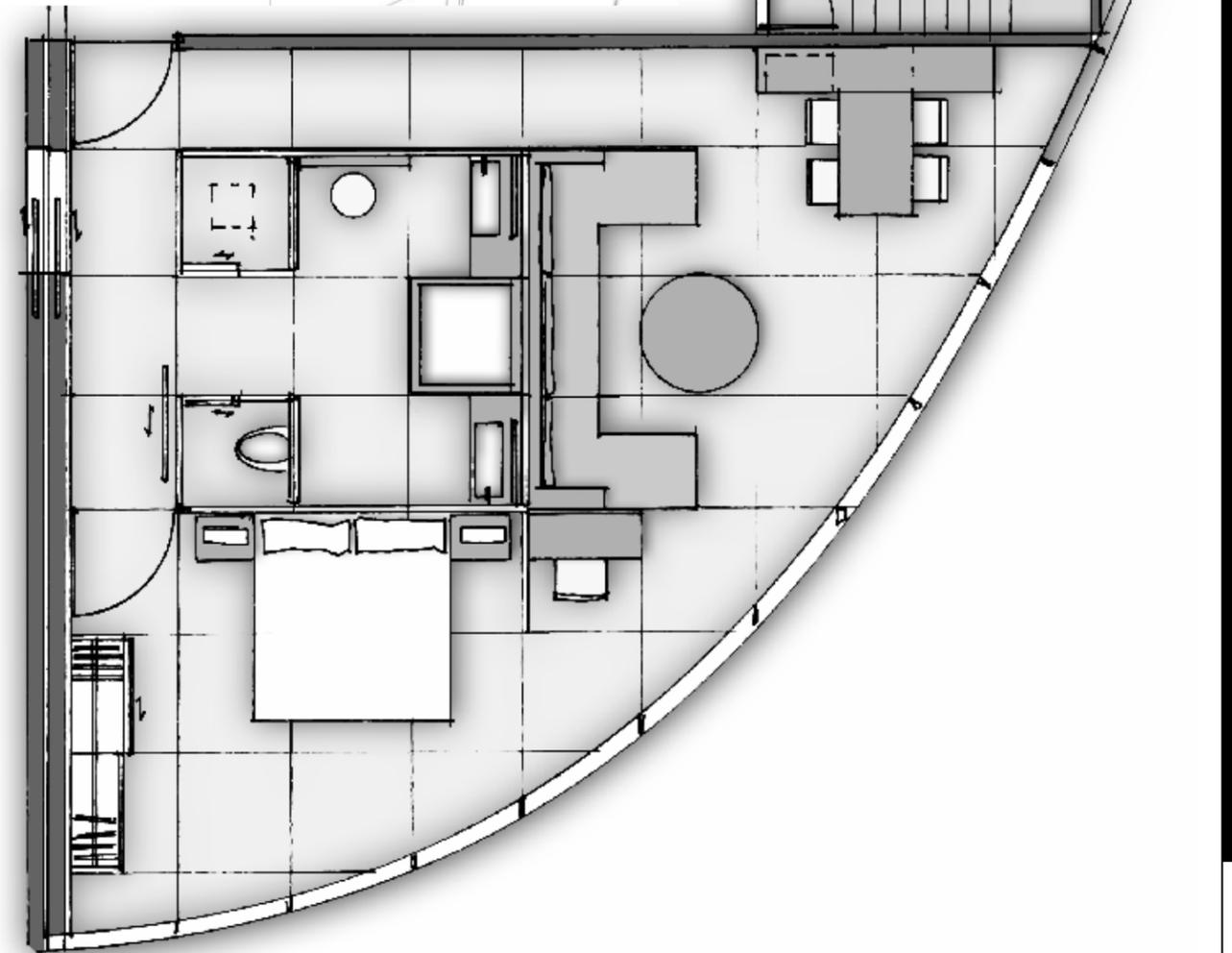
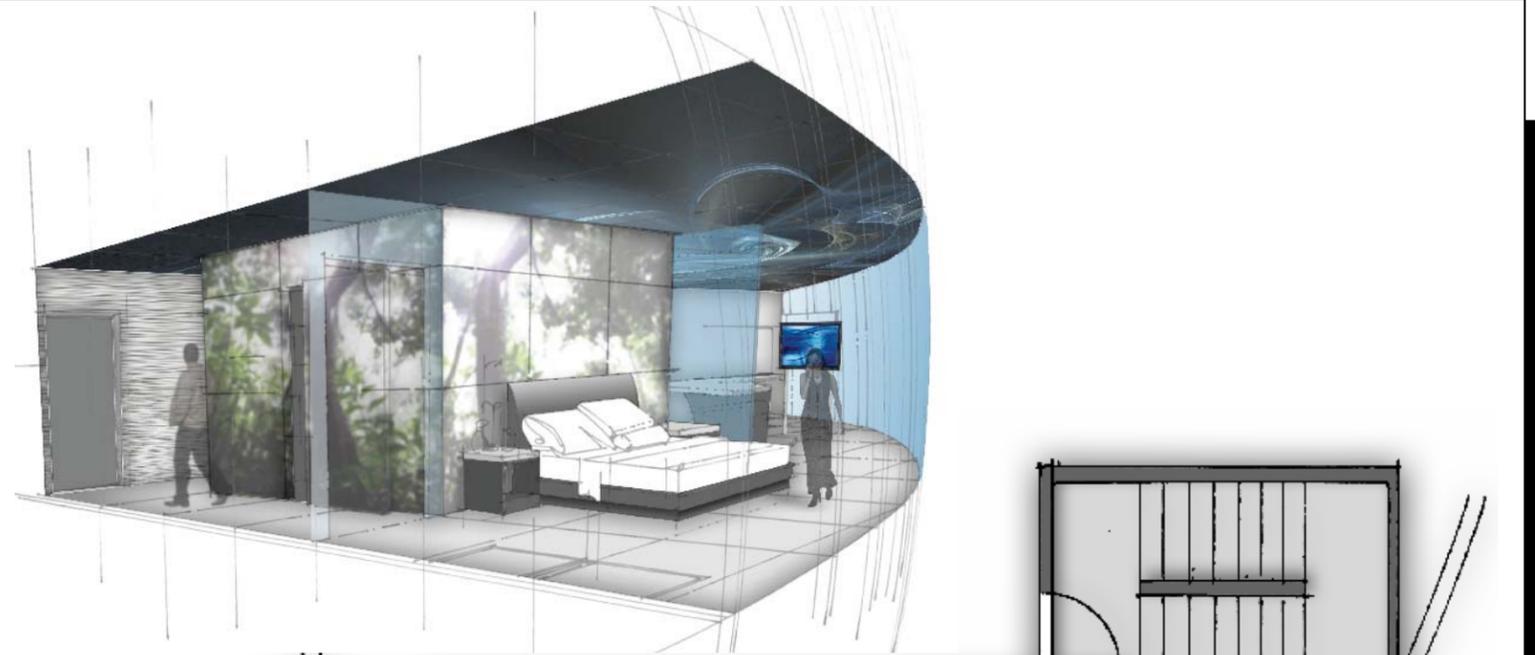
ROOF PLAN



# GUEST ROOMS & SUITES



GUEST ROOM



SUITE

# RADICAL INNOVATION

A BUILDING AS A LIVING

ORGANISM

