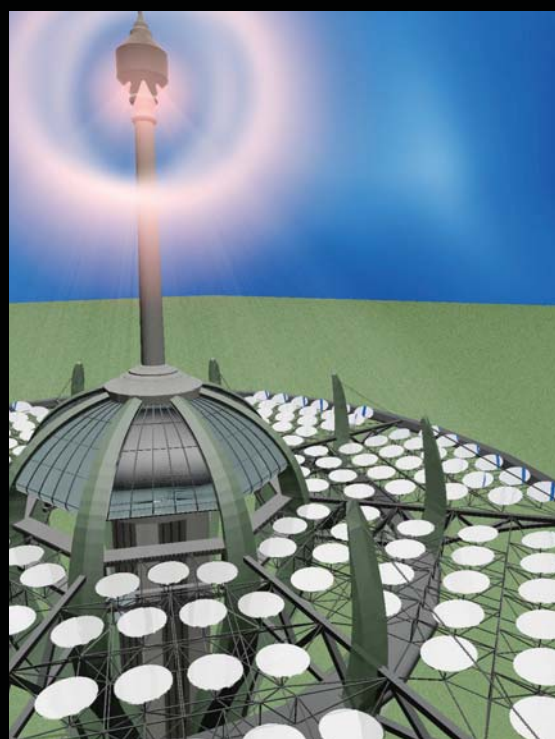
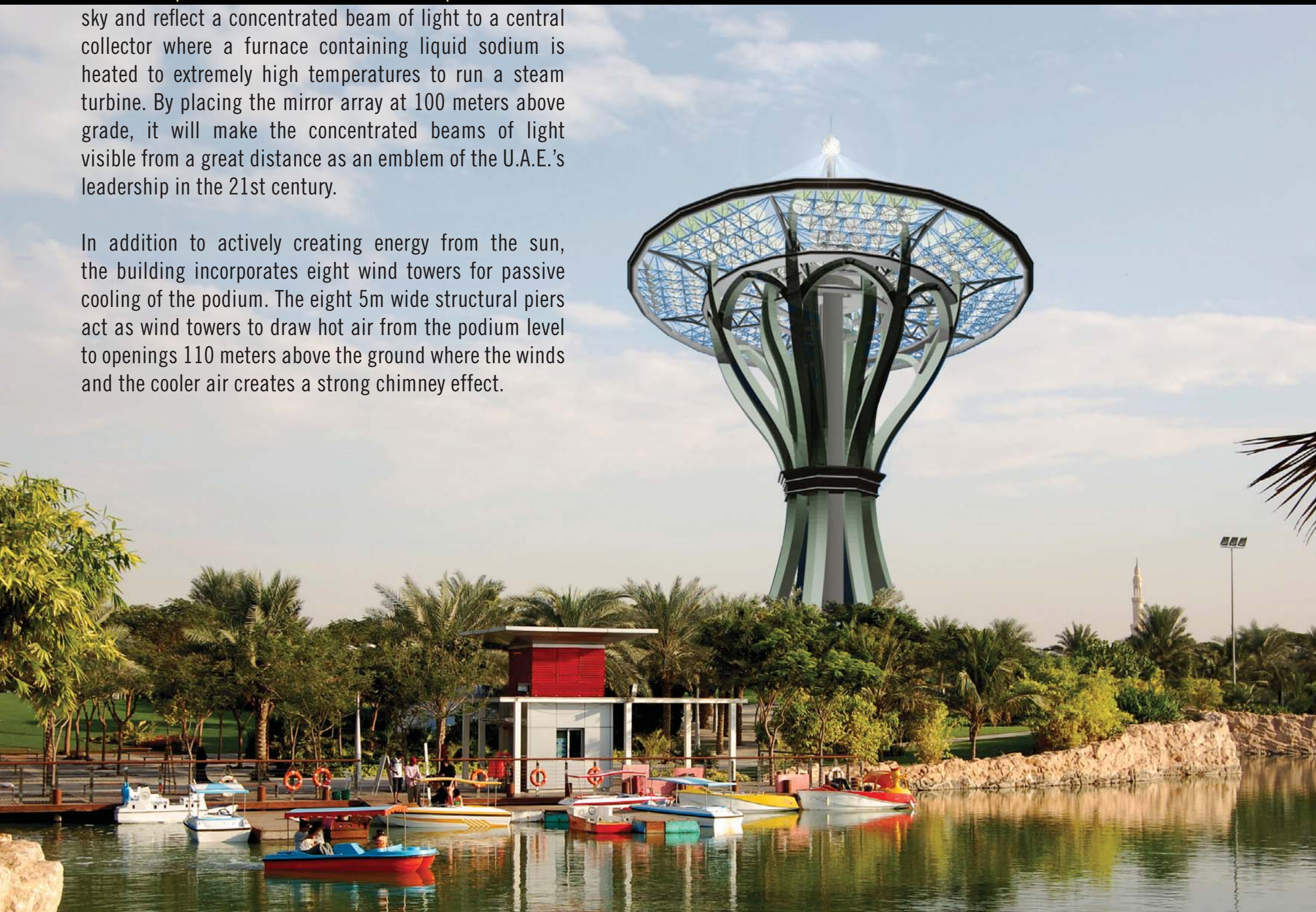


DUBAI IS BUILDING THE FUTURE

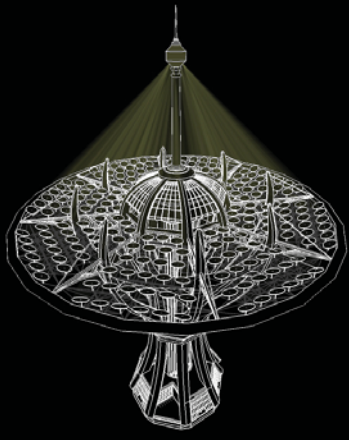
In the future all buildings will create the energy that they require to exist, as do all living things on the Earth, either directly or indirectly from the Sun.

The Almeisan Tower actively generates its own energy (and the energy required to run the rest of Za'abeel park) by integrating a 600KW solar power tower into the design (600KW is roughly the equivalent of the power used by 300 average households). 224 large heliostatic polished mirrors track the sun's position in the sky and reflect a concentrated beam of light to a central collector where a furnace containing liquid sodium is heated to extremely high temperatures to run a steam turbine. By placing the mirror array at 100 meters above grade, it will make the concentrated beams of light visible from a great distance as an emblem of the U.A.E.'s leadership in the 21st century.

In addition to actively creating energy from the sun, the building incorporates eight wind towers for passive cooling of the podium. The eight 5m wide structural piers act as wind towers to draw hot air from the podium level to openings 110 meters above the ground where the winds and the cooler air creates a strong chimney effect.



برج الميسان
THE ALMEISAN TOWER

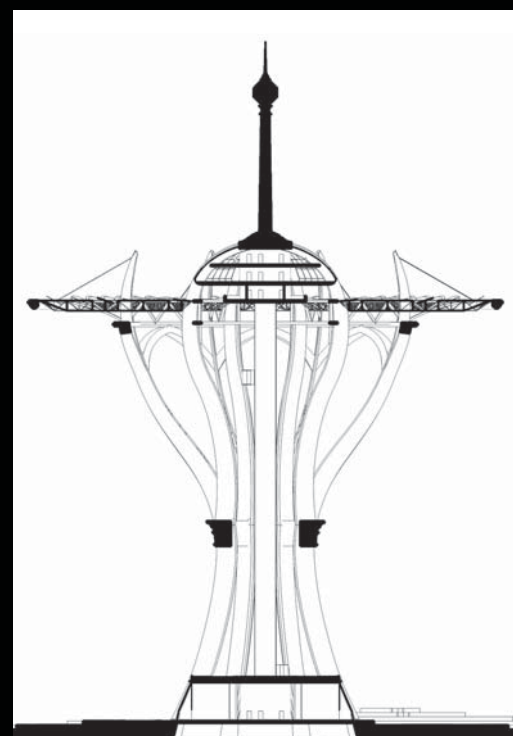
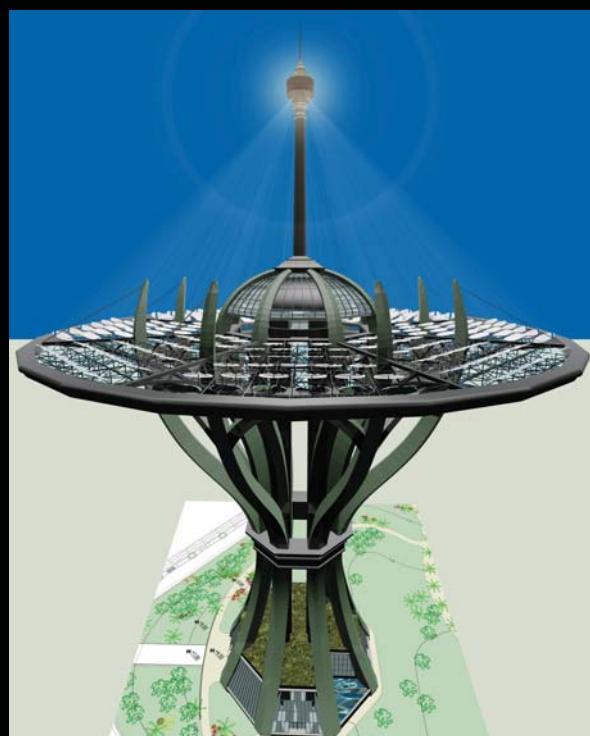
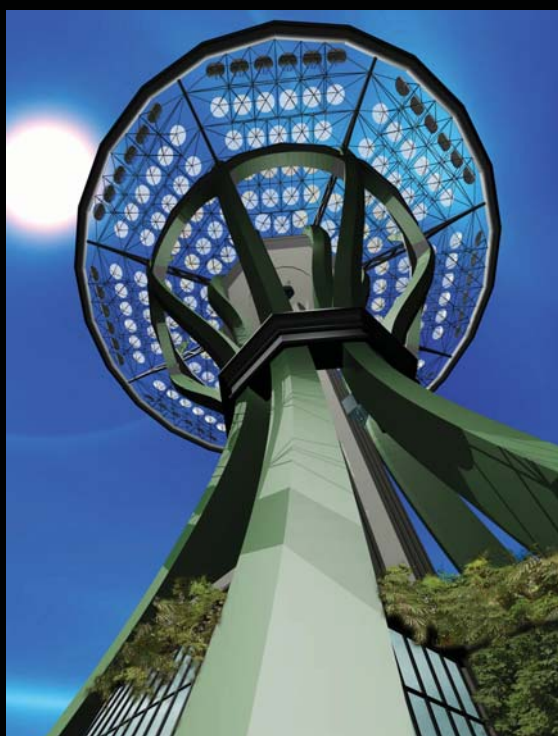
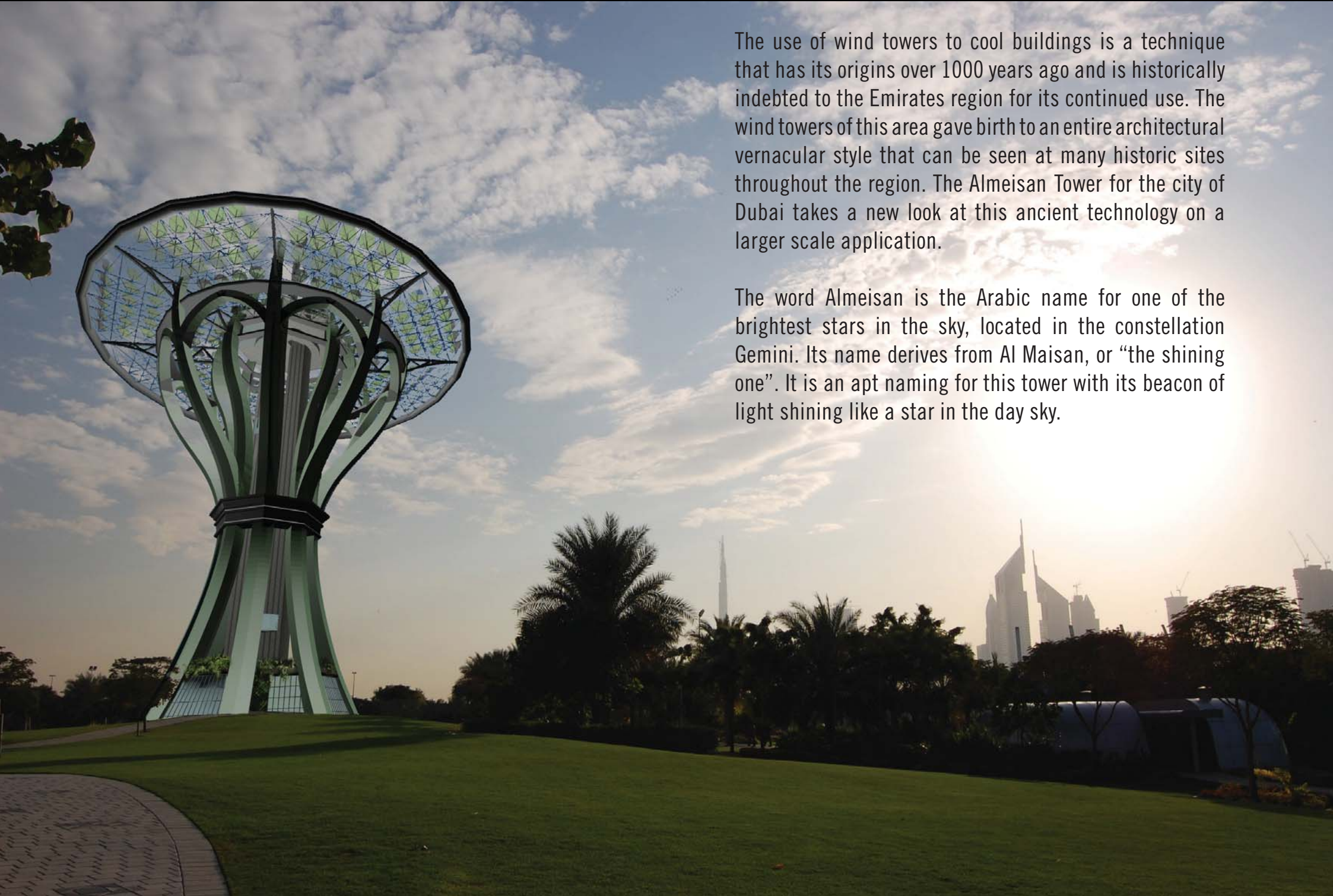


The eight main structural piers leave the ground at 60 degrees from vertical, driving up towards each other to almost touch at 50 meters above the earth. There they are tied together with a tension ring before blooming outward like the bud of a flower and opening up to reveal the inner piers that support the dazzling jewel of the café and the final structure of the collector tower far above.

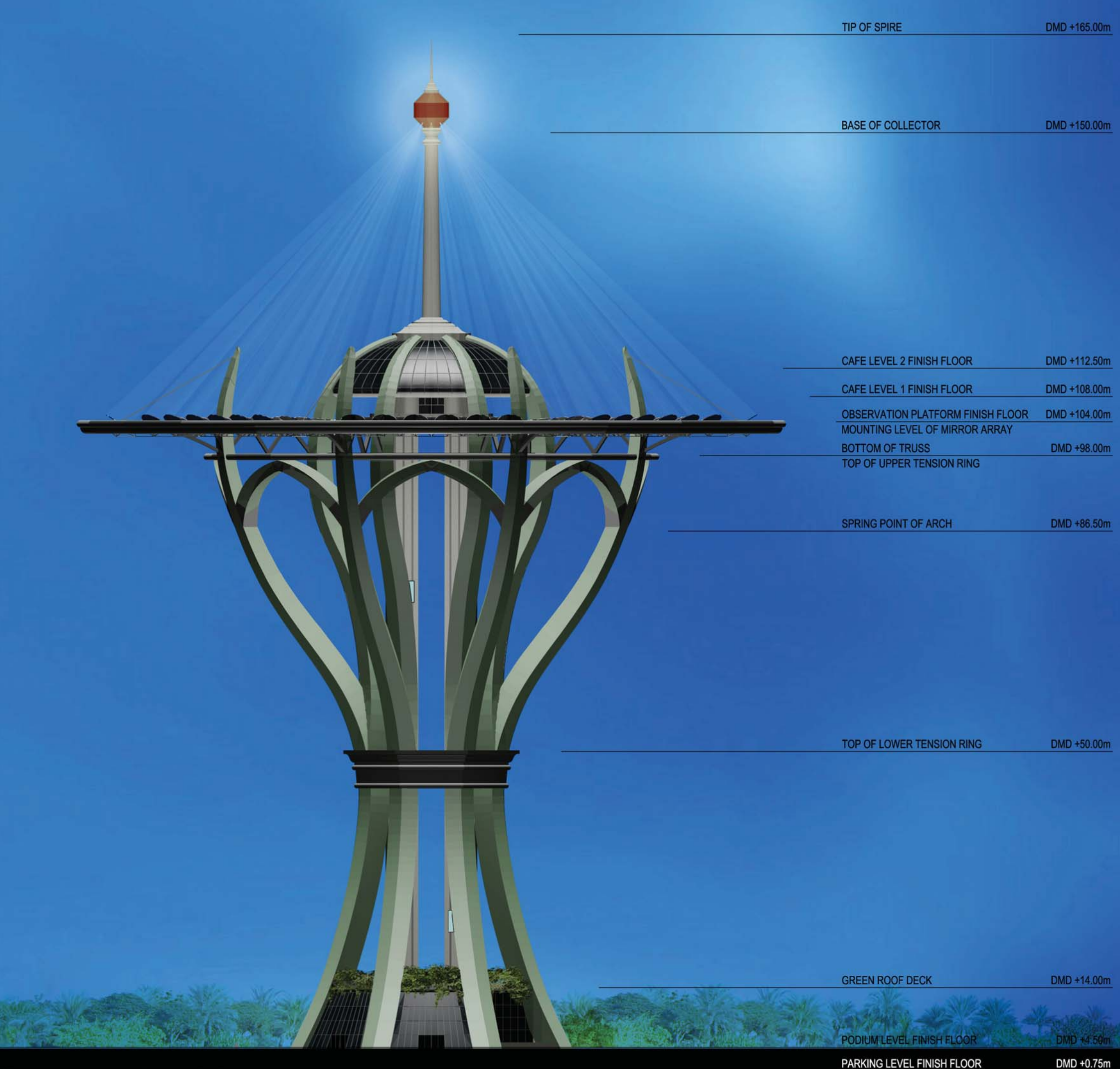
Like the pistil of the flower, the collector tower rises up another 30 meters above the Café to the central collector itself which will glow during the day with a heat of 500 degrees Celsius.

The use of wind towers to cool buildings is a technique that has its origins over 1000 years ago and is historically indebted to the Emirates region for its continued use. The wind towers of this area gave birth to an entire architectural vernacular style that can be seen at many historic sites throughout the region. The Almeisan Tower for the city of Dubai takes a new look at this ancient technology on a larger scale application.

The word Almeisan is the Arabic name for one of the brightest stars in the sky, located in the constellation Gemini. Its name derives from Al Maisan, or “the shining one”. It is an apt naming for this tower with its beacon of light shining like a star in the day sky.



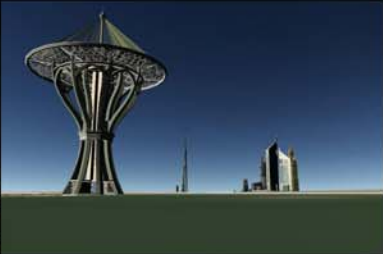
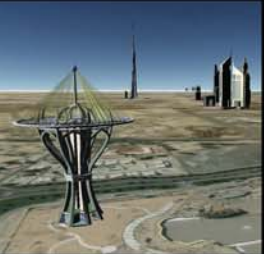
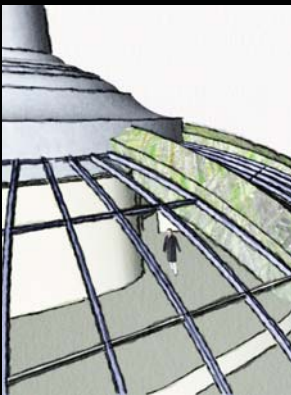
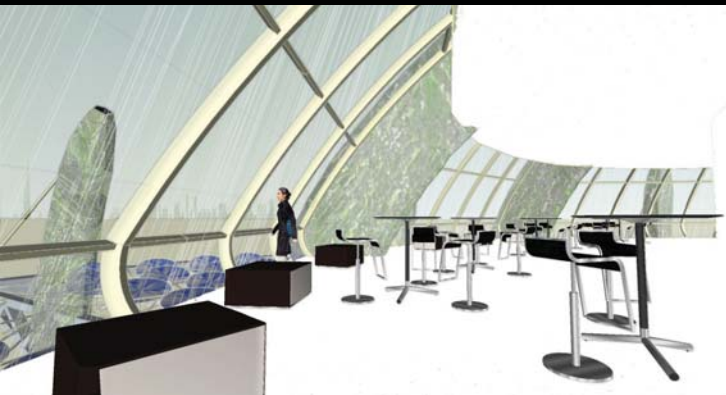
تاج الميسان THE ALMEISAN TOWER



Elevation Scale 1:300

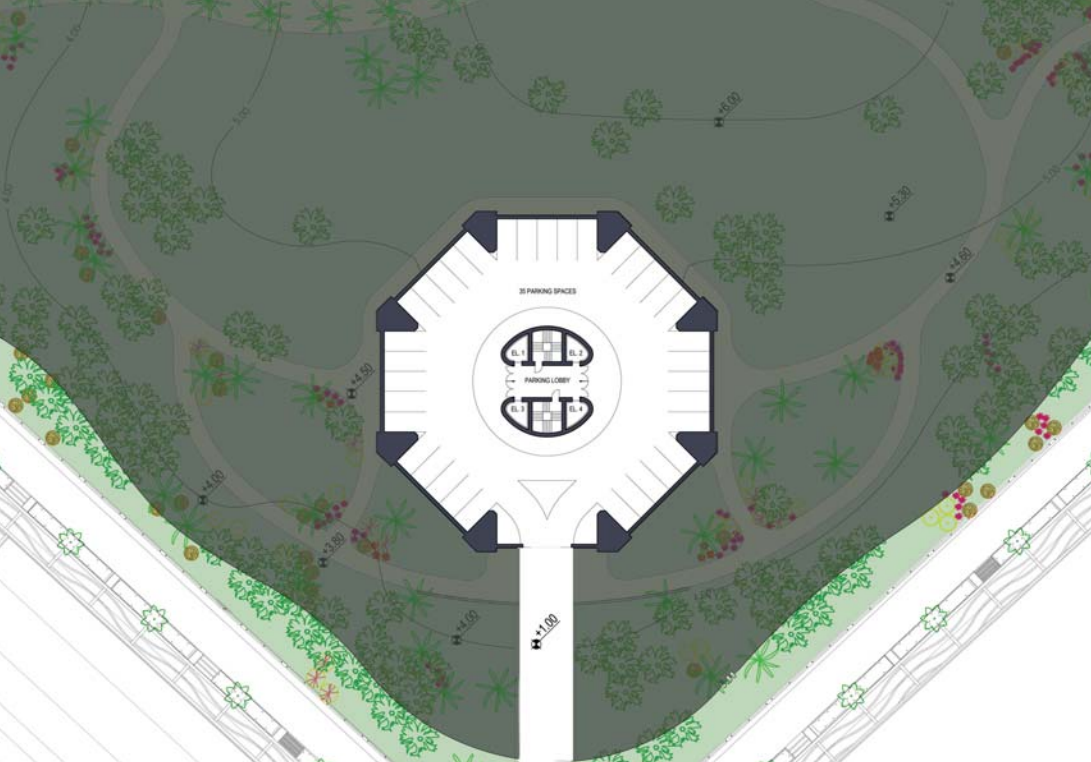


Perspectives Sketches of Cafe Level



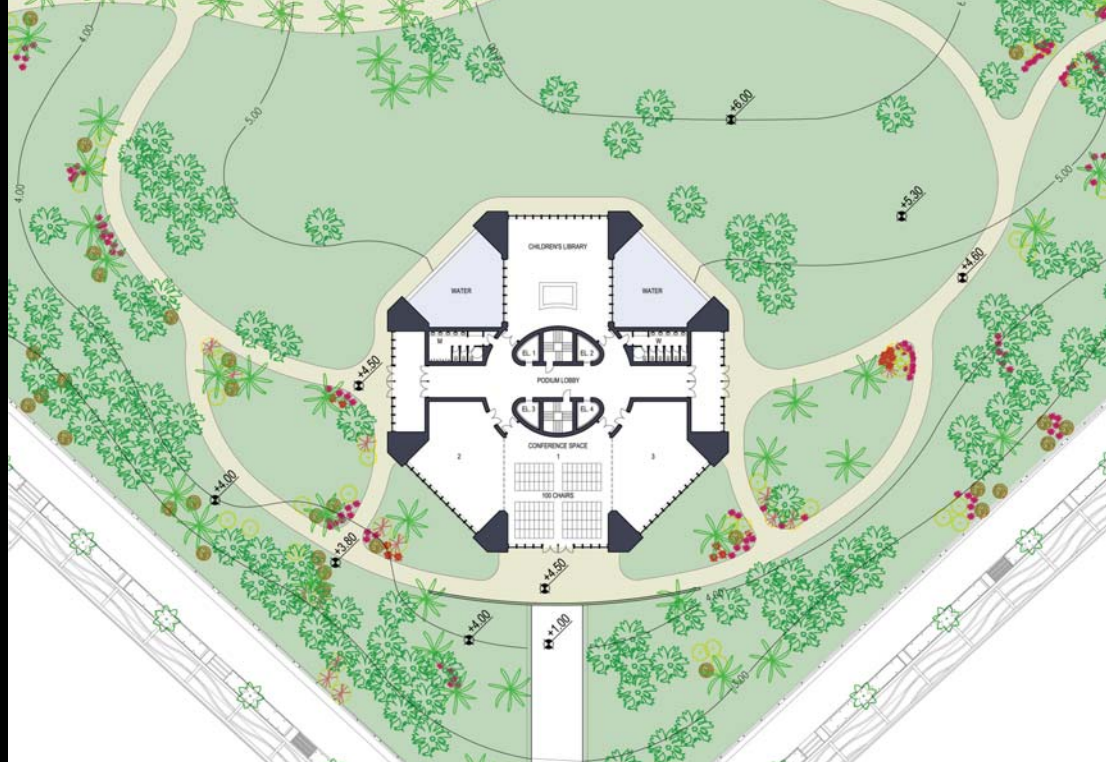
Site Context Thumbnails from Google Earth

برج الميسان THE ALMEISAN TOWER



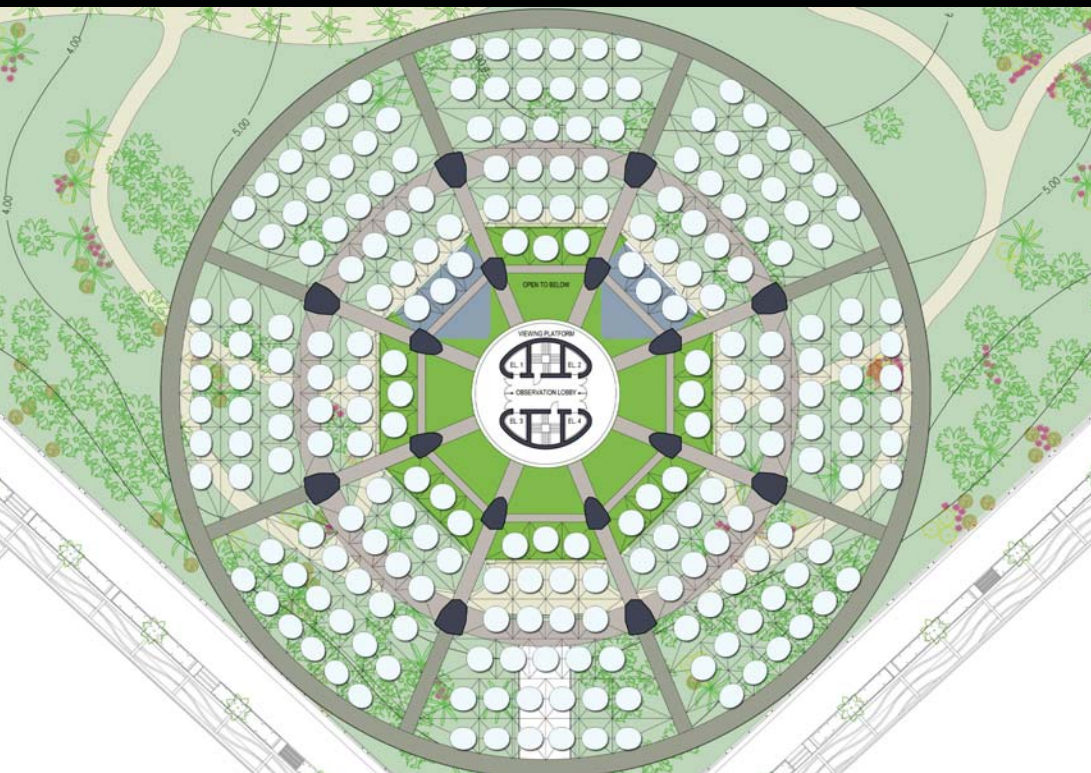
Basement/Parking Plan

Scale 1:300



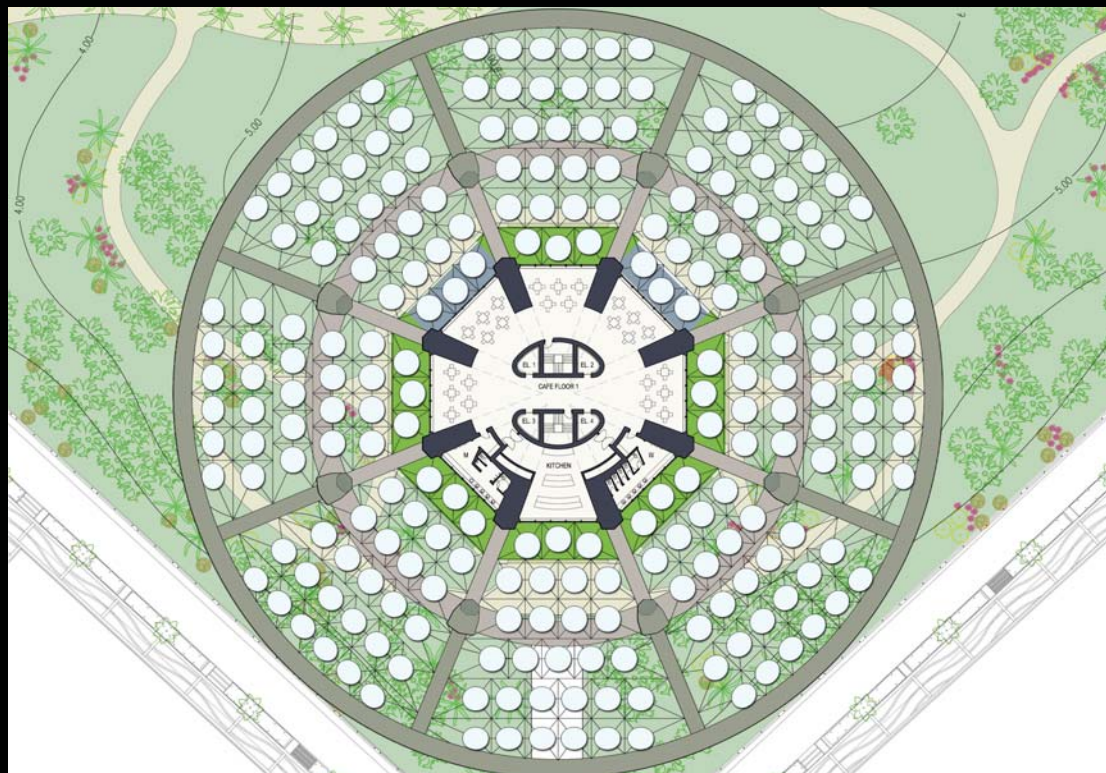
Podium Plan

Scale 1:300



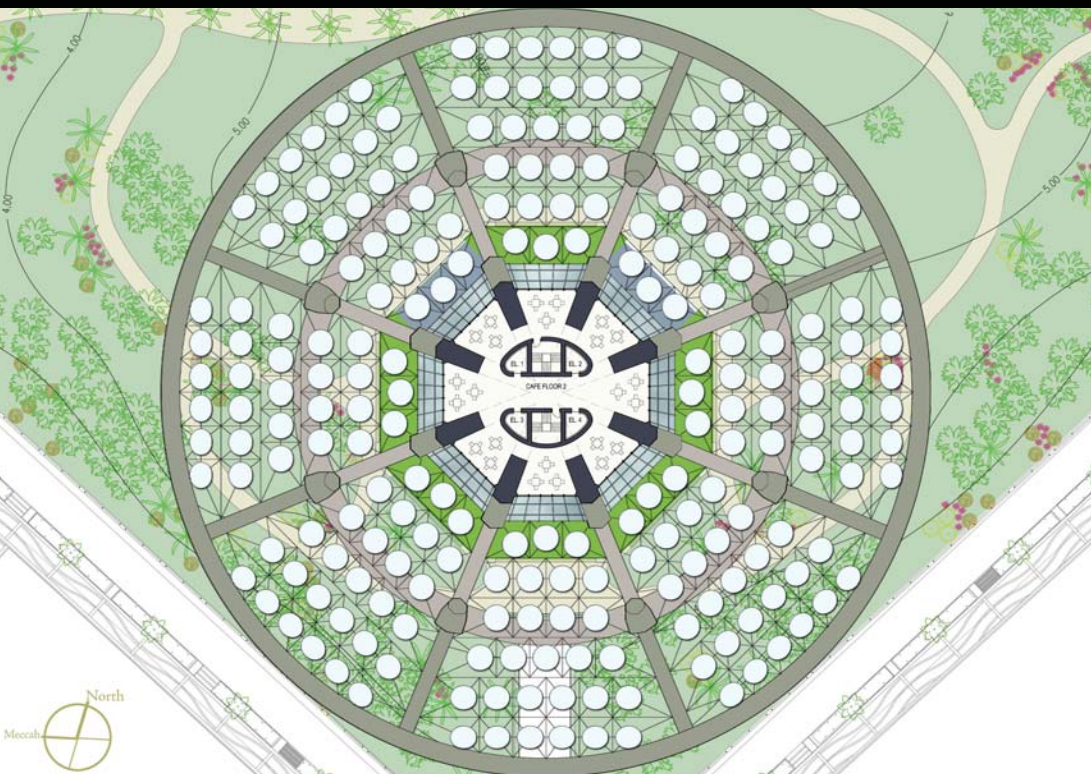
Viewing Platform Level

Scale 1:300



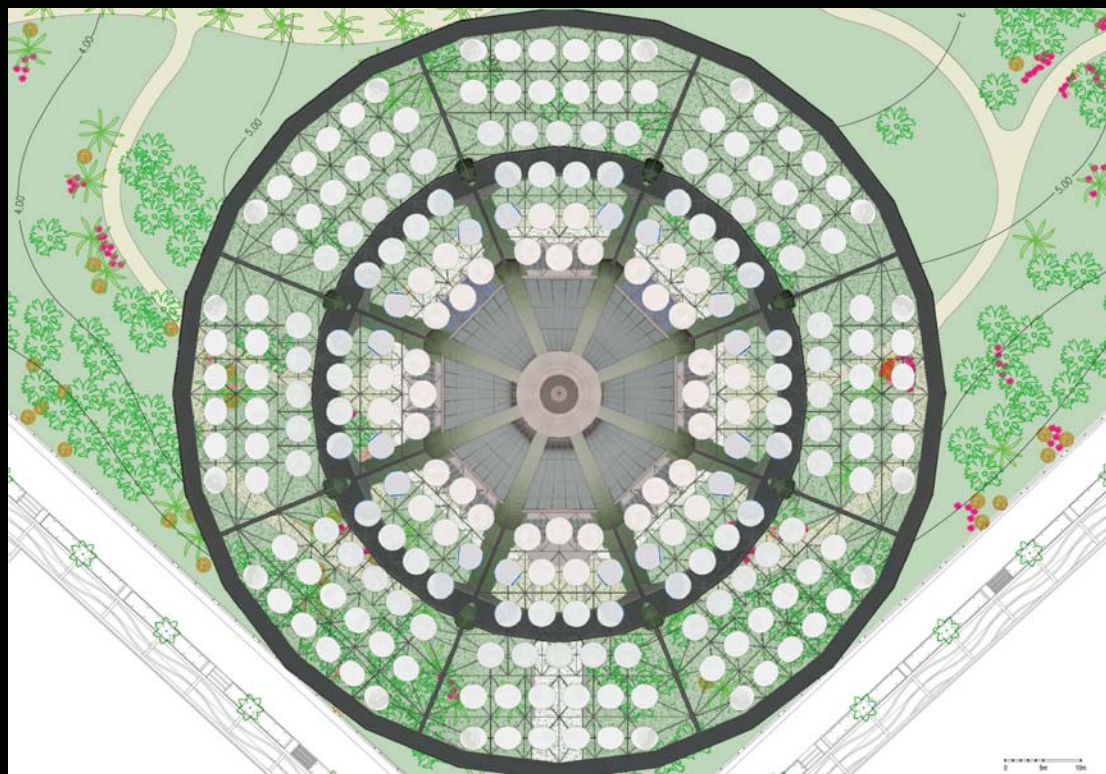
Cafe Level 1

Scale 1:300



Cafe Level 2

Scale 1:300



Roof Plan

Scale 1:300

The podium plan is direct and to the point. The result is that the building footprint is minimized in order to integrate smoothly with the existing landscape within the relatively small site boundary. The main organizing element of the 8 meter high podium space is the central hall that splits the vertical circulation core and accommodates easy access from any approach through opposite vestibules. The core consists of two fire stairs which create a spine on which travel four custom elliptical glass elevators of 6m² area each. On the south side of the central hall are the Conference Facilities (totaling 500m² area), and on the north side of the central hall is the Children's Library and Cultural Center (200m² area). This is a magnificent space which faces into the park and is surrounded on three sides with floor to ceiling glass curtain walls through which one

can see the tendrils of the plants swaying from the green roof above. On either side of the Children's Library and Cultural Center is a recycled pond that collects water from the living walls that run vertically on the exterior of the restroom facilities.

The living walls and roof of the podium level are a visual extension of the Za'abeel park landscape and another integrated system of passive cooling for the podium level. The energy that would be sunk into the roof is instead harnessed by the plants and the 1.5 meter soil bed acts as a massive heat sink for modulating the diurnal temperature variations of the desert, much as thick mud walls would do in traditional indigenous architecture. In addition, the plants shall be selected to intentionally creep down over

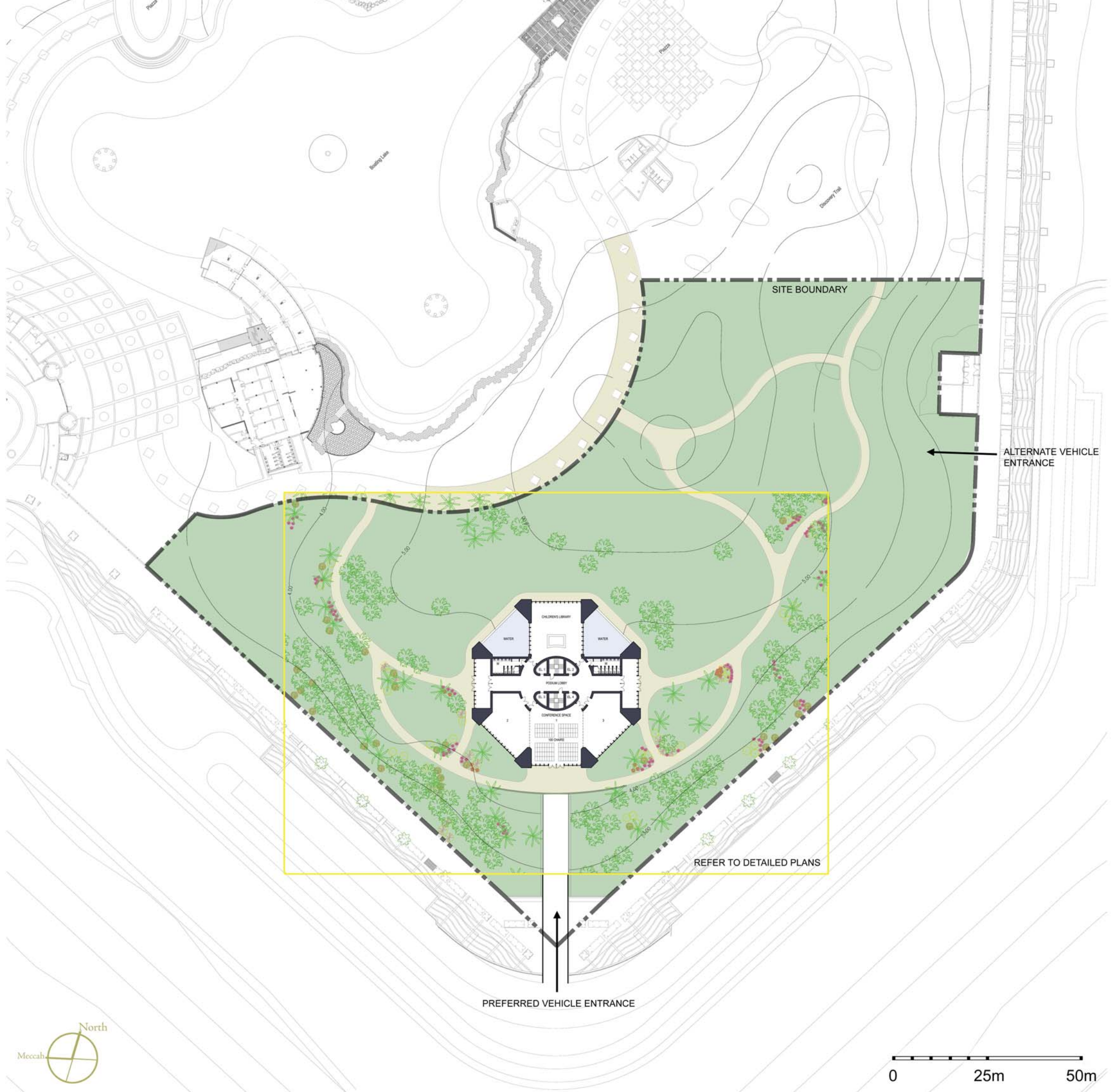
the edge of the parapet wall of the podium to provide shade to the curtain walls below – a kind of living solar louver. Actual louvers may implemented in the final design though they are not shown in the presented drawings.

Traveling up and through the green roof is a fantastic voyage towards the Observation and Café levels. The glass walls and ceiling of the elevator provide a panoramic view of the park below, the dynamic nature of the converging and diverging structural piers, and the mirror array above.

Stopping at the open air Observation level 100 meters above natural grade, what is to be observed is not only the view of the city on all sides around you, but also the array of mirrors, which your feet are walking at the mounting level

of. From here, 224 converging beams of light provide the tapestry through which you gaze out into the distance.

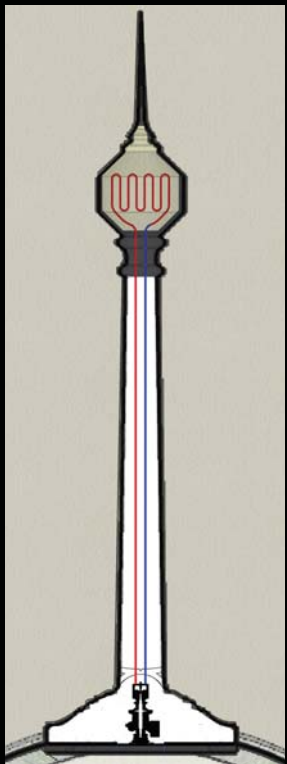
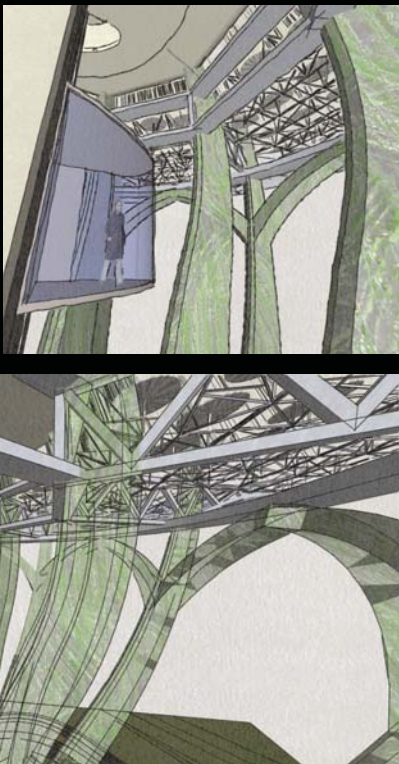
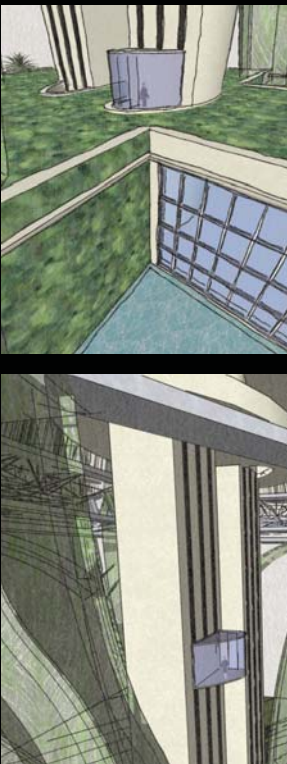
In the Café, this experience is taken to the next level as you have the magnificent experience of dining with one of the best views of the city with ethereal beams of light tenting above you from all directions. The Café is on the two levels above the Observation platform in a pearl-like enclosure that is enveloped by the secondary structural piers. These secondary piers stemmed out from the primary piers some 60 meters below and gently curved upward. They eventually meet above the Café to provide support for the base of the collector tower. The commercial kitchen is located on the South side of Café's lower level where the heat gain is shaded and the view is less dramatic.



Site Plan Scale 1:500



Detail Perspectives of Glass Elevator



Detail Section Showing Steam Turbine

برج الميسان THE ALMEISAN TOWER