Clock Celestial

A "human sundial" in a Florida park puts a new spin on an old instrument. BY ELLIN GOETZ, ASLA

The central feature of Parque Celestial in Naples, Florida, is an interactive sun clock, or "human sundial," designed so the shadow of the user tells the time of day. The sun clock is one of several celestial elements within the park at Mediterra, a 1,700-acre resort community headed up by Susan Watts, ASLA, vice president of the Bonita Bay Group. The park is the first of six, each planned with its own distinct character and intended to provoke a greater appreciation of the southwest Florida environment. Just as ancient cultures once turned to the skies for understanding, visitors to Parque Celestial experience the effects of time through observations of light and shadow, stars and planets, and seasonal changes in the landscape.

I was the landscape architect of record for the project. During the conceptual stages of park development, my coworker brought in a photo of a sun clock he saw in Europe, and so the idea of building one here in south Florida was born. Research on the internet introduced me to Douglas Hunt of Ayrshire, Scotland, who provides sun-clock calculations and guidance worldwide *(www.sunclocks.com)*. Most of his hundreds of clients are schools, which find the sun clock an easy and fascinating project for the schoolyard. After providing Hunt with the latitude and longitude of the Mediterra site, I received via e-mail a somewhat daunting, 16-page document detailing step-by-step instructions for the exact layout of the sun clock, including one that said, "Wait patiently for a sunny day, but one which is also not very windy."

The basic idea was simple: A series of markers are placed at hourly points so that one's shadow is thrown to that spot, creating, in effect, a human sundial. The markers at Parque Celestial are laid out to form a flattened ellipse due to its southerly location. We also simplified the layout to have only one ring of markers reflecting the "fall to spring" clock of Daylight Savings Time, as many residents in this community take off for cooler climates in the summer months.

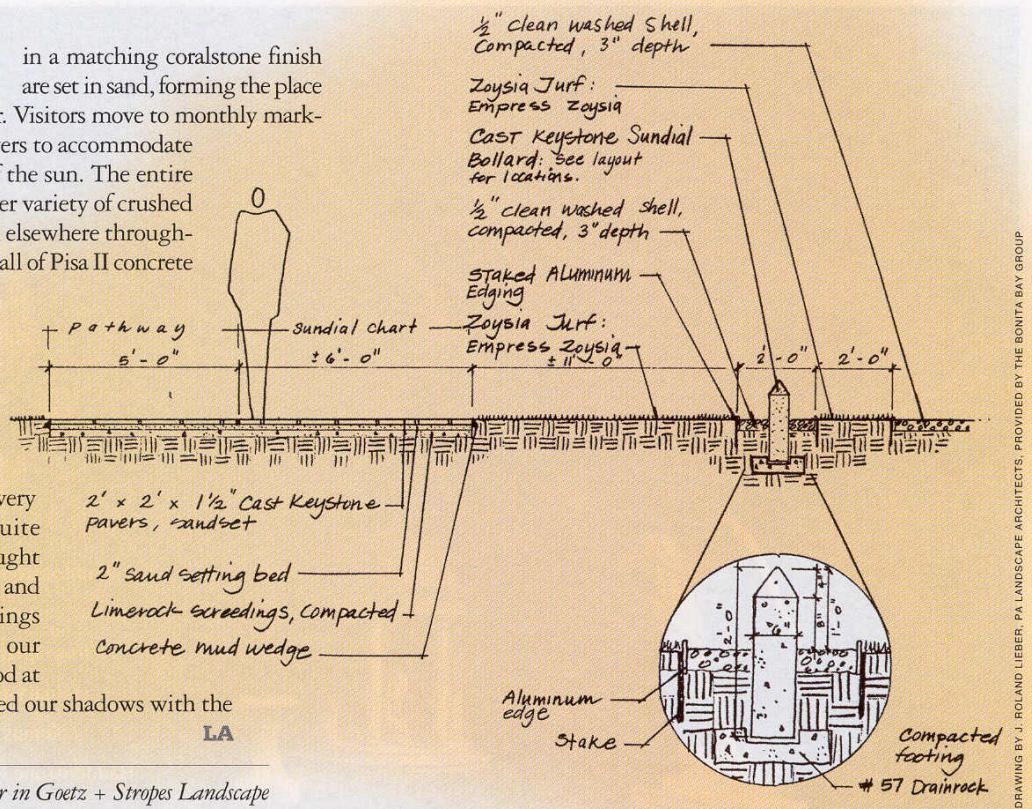
Our design for the park was based on circles, and the clock circle is about 30 feet in diameter. We formed its edge with interlocking concrete paver bricks and filled the circle with regional materials of crushed shell juxtaposed against fine zoysia lawn. The actual hour markers were locally cast concrete with a pitted "coralstone" finish, set several inches below grade for stability. The crushed shell surface is smooth and its white color perfect for catching shadows. Square two-by-two-foot cast concrete pavers

Visitors can tell the time on the sun clock by looking at the shadow they cast on markers set up at hourly intervals. This visitor is casting a 7:00 AM shadow.

landscape architecture

in a matching coralstone finish are set in sand, forming the place for people to stand at the center. Visitors move to monthly markers along this central axis of pavers to accommodate the changing seasonal angle of the sun. The entire clock area is ringed with another variety of crushed shell, matching paths that lead elsewhere throughout the park. A low retaining wall of Pisa II concrete blocks forms the outermost edge of the clock on the north and drops to be at grade along the south edge of the circle.

Once the sitework was complete, I worked with the construction crew to lay out the hour markers based on Hunt's very exact dimensions. At first quite skeptical, the crew was soon caught up in the novelty of the project and enthusiastically adjusted bearings and measurements. To check our layout accuracy, we simply stood at the center marker and compared our shadows with the time on a watch! **LA**



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The sun clock is in full sun all day. The stargazing pavilion overlooking the site provides a spot for visitors to make nighttime observations.