

SWISS FAMILY... WHAT?

Terraform is getting back to the root of ecological and urban design.

// By Jared Morgan

The idea of a living tree house is nothing new to humankind. The notion's been around at least 2500 years, according to Mitchell Joachim, the executive director and master tree house designer for Terraform—a nonprofit ecological and urban design organization based in New York.

“Our contribution to this kind of general thought, or replacing the brick in the wall of knowledge, is that we can actually do this,” promises Joachim. “You can certainly make a tree-house; you can graft trees together. All you need is a little bit of time, usually.”

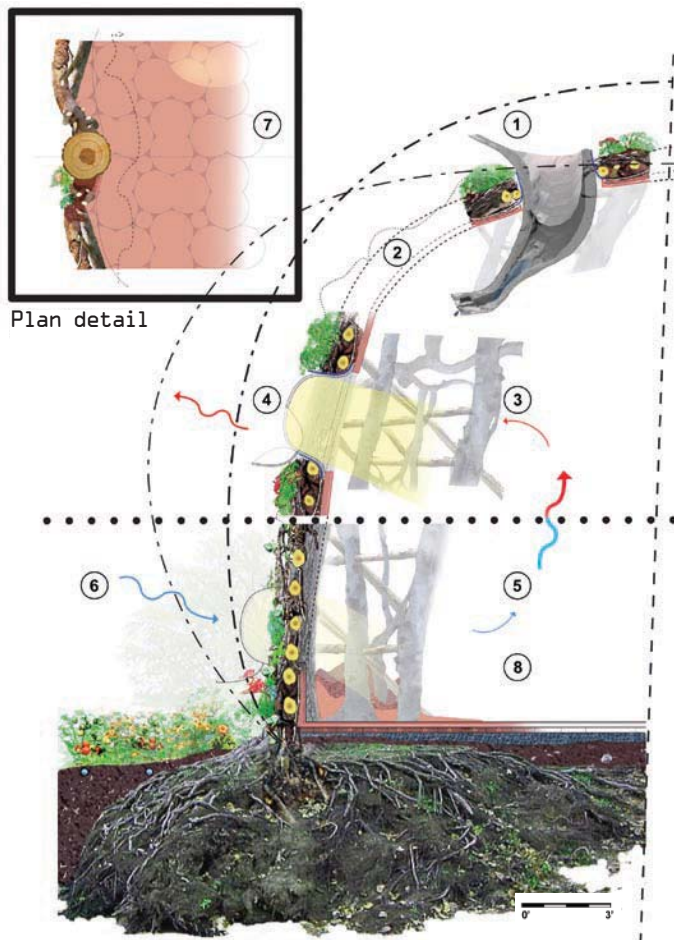
For as long as a solid and sturdy tree takes to grow, usually several years, is as long as it would take for your house to be complete.

“There are certain species that accelerate that growth very fast. They can do it within three to five years: various types of mangroves, ‘ferrungated’ ivy, willows—all sorts of species,” notes Joachim. “The problem with that is when they propagate, they don’t make trunks. If you think of most vines, they’re parasitic, they need to lean up against something.”

Terraform utilizes a computer-controlled model called CNC, or Computer Numerically Controlled filling that provides scaffolds for these plants, vines for instance, that channel and direct the growth into a triangulated geometry. “What that means is that a vine that could not stand by itself now is grafted to three other vines, like in a tripod, and it can stand and you can shape it within, you know, seven decimal places of accuracy,” he said.

The company has been making test structures with three clients in Bel-Air, Beverly Hills and Laurel Canyon—all of the tree houses in various stages of design. “The species that we use has to be local, it has to be a native species to survive that specific climate,” explains Joachim. “So there is a lot of testing and building up and then sitting the house into the site—that takes some time.”

Some of these tests were run in a laboratory at MIT. terraform.org



Turning a tree into a house

1. Rain water harvester at roof.
2. Thermal clay and straw based infill.
3. Expandable vine surface lattice.
4. Soy based plastic operable windows.
5. Buoyancy driven ventilation.
6. Cool air intake at floor level.
7. Rammed earth pavers w/tile flooring.
8. Active solar hot water system.

