

THE GLOBE AND MAIL

Eyes on second-prize

A trio of architects who enter a sustainable housing competition not intending to win get a pleasant surprise

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Never tell your kids this, but, sometimes, shooting for second place works wonders. Without the burden of being the very best, the mind — in a more loosey-goosey state — is free to be more creative.

Two and a half years ago, architect Terrell Wong convinced two of her friends, Anne Stevens and Clelia Lori, both architects and solo-practitioners like her, to combine forces and enter a nationwide competition.

Her only stipulation was that the newly formed group, which they dubbed Building Blocks, aim squarely for second place, so as to "make this enjoyable, meet new people [and] find new products."

When they found out they'd won instead, they first retracted their dropped jaws then started work on the more than 100 pages of construction drawings.

Building Blocks had won the Archetype Sustainable House competition sponsored by the Toronto and Region Conservation Authority and the Design Exchange. In doing so, the three architects proved that their prototype was not just a showcase of green technologies and ideas. It also could be mass-produced — and be adapted easily to mass learning as well, since one of the competition's requirements was that the house double as a school.

(Courses offered to high school and college students by the conservation authority will be taught there. Corporations that donated supplies to the project and unions that volunteered labour during July's "blitz build" also will use the home for teaching.)

While it wasn't called for in the competition brief, the home — nearing completion on the Living City Campus at the TRCA's Kortright Centre in Vaughan — is being built as two semi-detached units. Although identical from the outside, they will have different functions: One unit will be the picture of domestic bliss, with a furnished living room, dining area and bedrooms. The other will wear tweed and elbow patches, providing the space for classrooms, meeting rooms and a lounge.

Modules make this flexibility possible. There are 26 components (or building blocks) that can be combined in various ways. It takes 10 to make up one house. Although both sides of this semi require the foyer/staircase/dining module, one unit has a larger kitchen because the second unit contains a bathroom designed to meet general accessibility standards but that takes a bite out of the kitchen's size.

In one home, there's a large master bedroom on the second floor; in the other, there is an open space

where a bedroom would be, creating a double-height ceiling for the main floor. One home has a carport with a green roof; the other includes a two-storey "granny-flat" garage that is connected to the house by a bridge.

By stacking and arranging modules in different ways, a home can be shoehorned into any space.

"You'll have the ability to do main streets, infill, suburban-type ... streets with single-family homes, row houses — all these different things — so you've got a greater flexibility in town planning," Ms. Wong explains. "It's a very urban idea of suburban housing."

And, if the design were to actually go into mass-production, the module system would offer the homeowner real choices that go well beyond the usual ho-hum, countertop-and-backsplash dilemma. (For example, there can be as few as three and as many as seven bedrooms, all within the same-size home.)

More important, "economies and efficiencies of construction" can be created.

With that in mind, while the homes are truly sustainable, they're not one-off showoffs. "We're not going to do earth berm houses for 400 people," Ms. Wong says, laughing.

Rather, it's a lot of "little things"— advanced framing techniques; southern orientation (for passive solar heating); solar hot water; multiple heating, ventilation and air-conditioning systems (one being geothermal); and highly-efficient structural insulated panels.

In addition, a 40-foot wide "swath" of engineered wetland at the rear will eliminate the need for sewers.

"So, you take the technologies that we have and you tweak them a little bit and you tweak them again," Ms. Wong says, and then starts pointing around the room. "I know that a contractor's going to come here and [say], 'Well, that's cool ... that's cool ... there's no way I'm going to bloody well do that ... oh, that's neat ... what the hell is this?' If they take 10 — if they take 25 per cent — that's amazing."

Needless to say, designing and building a production-ready, sustainable home-cum-school has had its challenges. Early on, the design team lost Ms. Lori because she had other commitments, but, with the help of dozens of volunteers, a partnership with the Building Industry and Land Development Association and the continuing commitment of TRCA, the opening should take place in September as planned.

To further complicate matters, the team is aiming for the highest status — platinum — under the Leadership in Energy and Environmental Design rating system, which requires a Herculean effort.

"We have people picking up nails with magnets, we have people picking up foam. ... All the wood that is smaller than a certain size is being chipped for mulch for the site," Ms. Wong says.

They'll probably achieve it, too. Which proves that, sometimes, thinking about placing second produces a product worthy of first. But better you don't tell the kids.

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