

GREEN HOUSE

A home under construction in Kendall aims to be energy efficient from top to bottom.

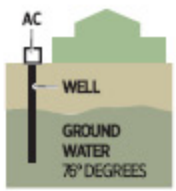
SHEET METAL SURFACE
Special shiny copper-colored surface deflects heat from structure. The roof is insulated with R-19 fiberglass.

CUPOLA
The heat of the entire home rises to roof peak and can escape through opened windows.

SITE ORIENTATION
East-west axis allows breezes to move through the house more easily.

SLEEPING PORCH
Family members can sleep in screen porch open to cooling evening breezes.

GEO-COOLING
A central air conditioning system draws up ground water through a well and cools the house via a heat exchanger.



KITCHEN ADDITION
Kitchen extends from the house to keep cooking heat away from the center of the home. Heat escapes through twin dormers.

EXTENDED EAVES
The roof overhangs 24 inches on each side, providing shade on all four walls.

DOUBLE DECKER
Wrap-around porches on north and west facades provide additional shade.

LANDSCAPING
Native trees in lowest lying area where water collects include cypress.

COOLING:
The home is designed to use the natural tendency of warm air to rise in order to vent and cool the house.

TRANSOM VENT
Opening above each door allows warm air to escape room.

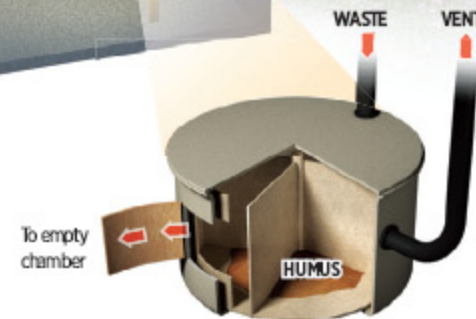


THERMAL CHIMNEY
Stairwells are stacked on top of each other, allowing warm air to flow up to the roof.

COMPOSTING TOILET

Waste is flushed to a chamber, where it breaks down to a natural fertilizer called humus.

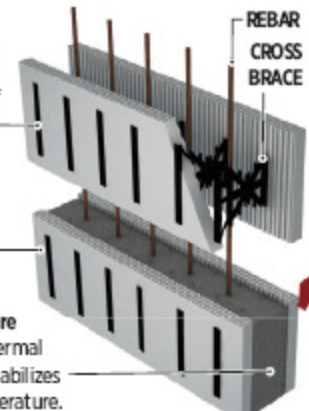
CAROUSEL CHAMBER
Each of four chambers is filled, then rotated in turn. Waste in each quadrant composts up to two years, then is emptied by a door in the front of the chamber.



INSULATED CONCRETE WALLS

Drywall attaches to hard plastic extensions of cross brace.

Solid concrete core provides thermal mass and stabilizes inside temperature.



CONSTRUCTION
Blocks are stacked on top of each other, rebar is inserted for structural stability, then cement is poured down the center.

