

22nd Top Company winners profiled, page 47

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PEOPLEISSUESBUSINESSSTATEWIDE

[Planet-Profit Report]

Intelligent

DESIGN

Colorado architects are transforming neighborhoods with projects that save water and energy and embrace the environment. Introducing the first Colorado Sustainable Design Award winners and finalists, **page 30.**

Geos net-zero neighborhood:
a project planned
for Arvada

[csda] SUSTAINABLE COMMUNITIES

1st
PLACE

Geos Net-Zero Energy Neighborhood

Architect:

Michael Tavel
Architects and
David Kahn
Studio



SUSTAINABLE FEATURES

- The project's solar orientation is designed to reduce energy demands by one-third. Deciduous trees have been selected to shade east- and west-facing windows in the summer but not shade photovoltaic panels – even in winter.
- Geothermal, solar thermal and photovoltaics are utilized for remaining energy needs. No fossil fuels or natural gas are provided to the site. Ground-source heat is provided through a horizontal loop field.
- "Percolation parks" are threaded through the neighborhood as common greens. These are usable, "mixed-use" greens that support urban agriculture, child play and wildlife habitat.

OVERVIEW

Geos will be the largest net-zero energy, urban mixed-use neighborhood in the United States. Earth and sun power will completely sustain the community's energy needs, and replace all fossil fuels. The project will consist of 282 dwelling units on 25.3 acres, including 8.5 acres of parks and 12.1 acres of parcels. The neighborhood is intertwined with natural systems, stormwater-fed landscapes, and civic places. Rain and snow melt feed street tree rain gardens, percolation parks, plazas and community gardens. Geos received final development approval from the city of Arvada and will begin construction in late fall 2009. This is a demonstration project in sustainable urbanism intended to encourage advancements in resource conservation in the American homebuilding industry.

JUDGES' COMMENTS

THIS PLAN FOR A PROJECT IN ARVADA AIMS TO BE THE LARGEST NET-ZERO ENERGY, URBAN MIXED-USE NEIGHBORHOOD IN THE UNITED STATES. IT COMBINES AN APPRECIATION FOR AN URBAN STREET NETWORK WITH INTERESTING WAYS TO ORIENT THE HOMES IN A CHECKERBOARD PATTERN TO BEST COLLECT SUNLIGHT, WITH THE "FRONT" YARDS ACTUALLY BEING ON THE SIDE. THE PROJECT HAS A GREAT STORMWATER MANAGEMENT SYSTEM AND STRONG ARCHITECTURE. THIS COULD BE THE FIRST NET-ZERO ENERGY COMMUNITY THAT ALSO FEATURES THE LOWEST POSSIBLE PRICE, WITH RELATIVELY AFFORDABLE HOMES AND NO ENERGY BILLS. WE CAN'T WAIT FOR CONSTRUCTION TO START."

