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**Rural
Builder**[®]

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**PRODUCT
PROFILE:**
Nails & Screw
p. 12

**BEST
PRODUCTS
AT THE
EXPO
P.10**

Starting at the top

TRUSSES

a case for T-bracing



PROJECT FEATURE:
**THE AVIATOR
CABIN** p.42



project feature

BY RURAL BUILDER STAFF

This project used foam for backfill

Subsoil support system is well known in heavy civil construction

HOW TO COST-EFFECTIVELY NESTLE A BUILDING INTO A HILLSIDE WAS A PROBLEM FACING PETER SHERRER, owner of PSG, a Wisconsin based firm specializing in real estate and construction. The building in question was a new 55,000 square foot office and distribution center for Wisconsin Vision Associates of Burlington.

Early design investigations into different structural engineering systems capable of supporting both the building's pre-cast wall panels and the weight of the hillside were cost prohibitive until the structural engineer suggested the possibility of using Foam-Control EPS Geofoam, a cellular plastic material from ACH Foam Technologies.

"By using the EPS Geofoam as the fill material, we were able to significantly reduce the lateral and bearing loads of the hill on the structure," said Scherrer.

The foam is about one-percent the weight of traditional earth materials. It has a high compressive resistance up to 18.6 psi at one-percent deformation. Lightweight and extremely easy to install using non-specialized labor, the construction team on the project assembled more than 470 cubic yards in just three days.

PSG was able to work with the sales and engineering teams at ACH to define the exact number and sizes of Geofoam pieces, which were delivered to the site pre-cut in the order needed. From there the earthwork contractor, Wanasek Corporation, was able to move the foam blocks into place by hand, stacking and assembling them in the specified order without much effort.

A spokesman for the project said that while this subsoil support component has been a staple of heavy civil construction, general contractors in the vertical construction market are just beginning to realize the benefits. **RB**

