Green excellence resides on Pine Street

By Josh Barr

Going green ain't easy, but it sure helps you sleep at night. One area firm met the challenge head on in downtown Hazleton. So was it a success? The governor seems to think so.

Gov. Rendell awarded one of his nine Governor's Awards for Environmental Excellence to Borton-Lawson for its work on Hazleton's Pine Street Neighborhood Revitalization.

The green-minded undertaking, which has been in the planning stages since 1999, recently reinvented a three-block section of the downtown which, over the last decade, had become largely vacant and no longer industrially viable.

This environmentally-friendly and sustainable revitalization was the first of its kind in northeastern Pennsylvania.

Pat Endler, AIA, LEED-AP and vice president of buildings at Borton-Lawson, an architecture and engineering firm based in Wilkes-Barre, Bethlehem, and State College, says going green is becoming less of a fad and more of a necessity.

"With gas and oil prices now what they are, it's really starting to swallow us up," says Endler. "(Going green) is really becoming mainstream now that it's something we're all going to have to do to improve our standing and our own ability to make progress."

The Housing Development Corporation of Northeastern Pennsylvania, which introduced the green principle into the undertaking and hired Borton-Lawson for the development in 2002, joined forces with Mayor Lou Barletta's office and other government officials, financial institutions and community agencies to transform the site into 26 affordable and accessible Energy Star certified homes ready for single families.

The revitalization adhered to what designers call "Smart Growth," an all-encompassing concept that determines best options from site location and design to materials used in construction. This concept maximizes existing infrastructure and services to reduce stress on these services, and outlines energy and resource efficiency, affordability, universal accessibility, and sustainability as its core design goals.

To accomplish these goals, the Pine Street Neighborhood homes combine energy efficient (recycled) materials, construction, and systems to offer homeowners long-term affordability while reducing their carbon footprint as compared to a typical home.

Construction utilized more abundant materials that last longer and cause less environmental impact in their production, use, and eventual disposal.

The recycled materials used will reduce landfill waste and lower costs associated with developing and transporting new materials.

In addition, designers opted for regionally produced materials, eliminating the expense and environmental damage associated with transporting building materials and contributing to the local economy.

The Pine Street homes feature highly efficient heating, cooling, ventilation, lighting and appliances. Pair these specifications with the neighborhood's energy efficient construction and residents can save about 30 percent over standard construction.

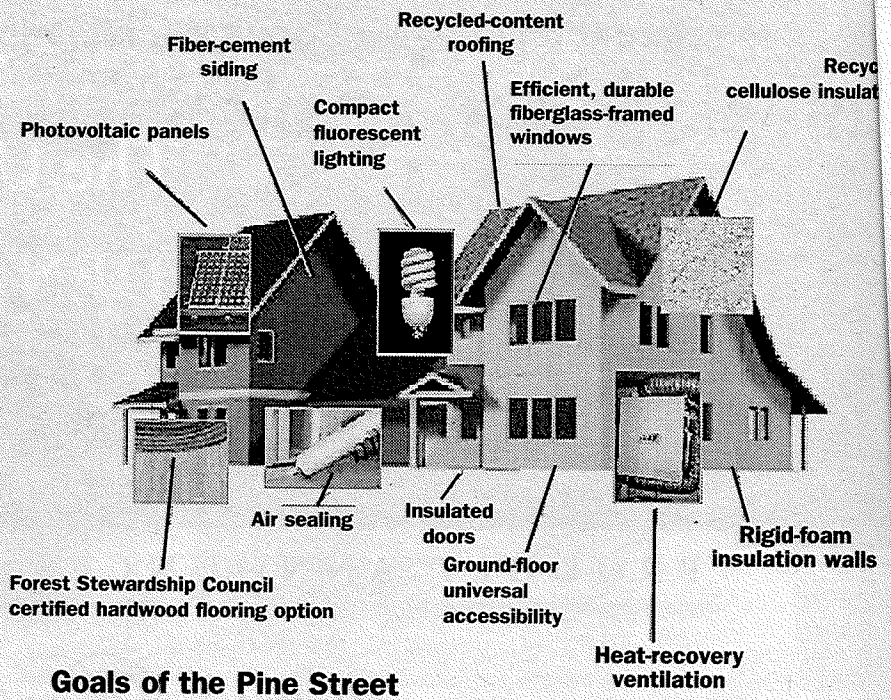
The homes can also produce their own solar energy. Solar electric (photovoltaic) systems on the southern-sloped roofs allow residents to supplement the domestic hot-water heater and cuts down utility costs. And through net metering, residents can even transfer any energy surplus to the local utility, in return for reductions in the billable energy consumption level.

Additionally, ventilation heat recovery systems were used. Each system exhausts internal air and brings in fresh air while recapturing 70 percent of the heat.

Pine Street Home owners can expect to spend about $700 a year for energy costs versus more than $1,100 a year for owners of a traditional home built to code.

"Pine Street home-owners will benefit on a monthly basis, forever," says Endler. "Many of the Pine Street home features are simple design decisions which impact the performance, but are not particularly expensive on their own. Further, these features are becoming more commonplace and thus, more affordable."

Pine Street Neighborhood's location *coincided perfectly with the goals of* ***Smart Growth.*** *Within easy walking distance from the downtown's shops, services, recreational venues, and mass transit, it offered the potential of* ***reducing automobile dependency,*** *resulting in less energy consumption, pollution, congestion, and road maintenance costs. Another important feature was situating the community such that existing power sources, water supplies, streets, and municipal services were already in place and* ***did not require significant extensions*** *or construction.*



Goals of the Pine Street Revitalization:

- Create model energy-efficient "eco-homes"
- Innovative center-city brownfield re-use
- Replace with attractive, affordable single family homes
- Facilitate community spirit
- Emphasize neighborhood safety and security
- Initiate a pedestrian-friendly environment

Designers opted for regionally produced materials, not only contributing to the local economy, but also eliminating the expense and environmental damage associated with transporting building materials to the Pine Street area from a distance.

Environmental Results

The magic of the project is that, as the first of its kind in northeastern Pennsylvania, the Pine Street revitalization focused on "green technology" and used a concept termed by designers as "Smart Growth" to serve as the keystone ... Smart Growth is an all-encompassing concept that determines best options from site location and design to materials used in the building construction. Smart Growth maximizes existing infrastructure and services to reduce stress on these services, and outlines energy and resource efficiency, affordability, universal accessibility, and sustainability as its core design goals. To accomplish these goals, the Pine Street Neighborhood homes combine energy efficient (recycled) materials, construction, and systems to offer homeowners long-term affordability while reducing the carbon footprint as compared to a typical home.

The revitalization cost $3,500,000.