LOOKING GOOD:

Faces365 and Planet Fitness aim to bring affordable facials and fitness to the Houston area. **PAGE 2A**

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FOCUS: GREEN HOUSTON

Back to basics

A home on Kane Street in the Sixth Ward illustrates porches, a raised foundation and the use of local materials.

Necessity, not a 'green movement,' drove past generations to conservation, efficiency

BY NICOLE BRADFORD
HOUSTON BUSINESS JOURNAL

When all they had were crude tools and their imaginations, building designers made the most of both.

For centuries, functional, sustainable buildings that used little or no electricity weren't part of a "green movement." They were a necessity.

"During the early 1900s, buildings were designed to encourage air to flow through them," says architect Jody Henry, project manager for SHW Group. "This was one of the 'greenest' things we could do, especially in the

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THE LISTS

INSIDE

'GREEN' — BUT GONE...

Looking back through 40 years of experience in architecture, William Neuhaus III of Studio RED Architects recalls some key elements from yesteryear that were — and are — sustainable practices:

- **Sleeping porches.** These were normally in the southeast corner (to take advantage of gulf winds) and built with natural materials produced or harvested locally — brick plants on Buffalo Bayou, cypress and pine from nearby forests and Spanish moss for insulation.
- **Shutters.** They were not decorations — they sheltered homes from the sun and protected them from hurricanes.
- **Covered sidewalks and screened porches.** Providing shade and cooling, these elements were found on houses, hospitals, retail and industrial buildings.
- **Clerestories.** Rows of windows above eye level captured north light and vented overheated space.

Basics

FROM PAGE 1B

hot and humid climate. We oriented buildings to have increased north and south exposure and less east and west exposure, as those angles had the most heat gain.

"Bedrooms were located on the east side of the building and dining rooms were on the west side, so the actions of the day followed the rise and fall of the sun. This would allow us to have our lights off and reduce heat gain in the building."

It sounds like a modern sustainability plan but, in fact, it was the common-sense way to design houses and buildings. A trend toward luxury and amenities, combined with technology, led designers away from such planning.

"When air conditioning was invented, we went away from all of these 'green' trends," Henry says. "We were able to close off the building and orient it whatever way we wanted. We started to ignore the simple rules of smart design — the rule of nature."

Henry

Creative ways to shade windows — concrete trellises, vines and operable louvers — gave way to high-tech automated blinds and even glass that tints as the sun strikes it at various levels.

Today, as designers aim to make their buildings more efficient, she says, they turn to both traditional methods and technology — even early technology.

"Remember the Clapper? — clap your lights on and off?" Henry asks. "This was a great way to save energy and one of the earliest and most popular occupancy sensors. In the 21st-Century schools that SHW Group designs, we incorporate occupancy sensors in every classroom. When a teacher enters the room, the lights come on, and when he or she leaves, the lights remain on for a certain timed period and then shut off. This effectively conserves energy and decreases electricity bills."

The Isabella Court apartment complex on the 3900 block of Main Street, makes use of clerestory vented atrium space to provide natural ,through ventilation — a design used in buildings before the advent of air conditioning.

One of the firm's projects, a Spring Independent School District elementary school, is a two-story, rectangular building oriented with the long sides facing north and south.

"Every classroom will be lined up along those walls and every classroom will have natural light and daylight harvesting," Henry says. "Each room will have sensors that shut the lights off and turn them on based on levels of existing light in the room. It is the 2009 response to eating dinner on the west side of your house so you don't have to turn the lights on."

AN ENERGY-RICH CULTURE

With memories of his grandfather's coal bin and his father's leaky oil furnace in mind, Peter Bishop points out an obvious indicator of a society created with vast amounts of inexpensive energy.

"If you ask most people, 'What color is gasoline?' They don't know," says Bishop, now the coordinator of the graduate program in Future Studies at the University of Houston's College of Technology. "Frankly, people don't see their energy. You don't see your electricity. But your grandparents probably cut the wood to cook their food and get their heat. Their energy was very visible to them, because they chopped it all summer and stacked it in the barn."

With its sprawling suburbs and retail centers, Houston is an example of a population treated to "the best energy source in history — crude oil and its products," he says.

"Depending on who you listen to, we've only used a third or half of what's available, but there was so much available we could afford not to pay attention to it," Bishop says. "We discovered

a treasure, and we've been living off that treasure for, say, about 60 or 70 years. What we are trying to figure out as a society is, as it becomes less available — or maybe not so much less available as harder to get — how we are going to shift our practices from an unbelievably easy and inexpensive source to other sources?"

The "treasure" of crude oil has been available for so long that modern society has built its houses and vehicles without regard for efficiency, he says.

"The shopping mall itself is a function of cheap, easy energy," says Bishop, who envisions a gradual change from an energy-rich city to a more walkable, sustainable city.

But those changes will be gradual, he says. Just as the city did not develop 30-minute commutes within only a few years, it certainly will not change drastically in five years. And suburbs — still preferred by families — aren't going anywhere. However, the children who grow up in them will probably be more like their grandparents than their own parents in terms of conservation and energy efficiency.

"People today just really haven't been educated on energy and its role in society," Bishop says. "Our children will know a lot more about when to make an investment in energy, things like putting in more insulation or buying an air conditioner that is more expensive initially. People will be more sensitive to what's called life-cycle costs — those things that affect the overall costs of a home, automobile, a building. Sometimes that can be 20- to 30-year process."

GREEN IS NOT NEW

"When visitors exclaimed 'Houston is green,' they used to be talking lawns, live oaks and money," says William Neuhaus, principal at Studio RED Architects. "Today, green symbolizes a drive for energy-efficiency and environmental balance. The City of Houston has the largest fleet of hybrid vehicles, commitment to solar energy and is a Clinton Climate Initiative city. In a democracy, the responsibility is not the government's alone — all must be accountable."

Neuhaus

With 40 years of architectural experience, Neuhaus has particular interest in renovation and reuse projects such as the conversion of Jeff Davis Hospital to Elder St. Artist Lofts and the 1948 Nabisco Bakery into the John P. McGovern campus, a medical office building.

"After World War II, Houston believed everything was possible — leave the farm, forget the lessons learned from parent, grandparent and Mother Nature," Neuhaus says. "We thought the Gulf Coast provided an infinite supply of resources, the ever-expanding interstate highway system would always bring new products, and advances in engineering and education will solve all problems.

"We ceased recycling, dug up the vegetable garden and stopped composting. We were becoming urban. Houston could do anything — how about an air-conditioned stadium or a man on the moon?"

He points to the period after Hurricane Ike, when some residents had no power for weeks.

"Did you wish you could open your windows? Was it nice to meet your neighbors? Would a screen porch have made your life more comfortable?" Neuhaus asks.

"Post Ike, following an economic awakening and a political upheaval of epic proportions, it is time to retrofit, renovate, reuse and restore," he says. "Before building materials became commodities, this was our way of life. Everything was recycled, building products were local and builders' craftsmen had intimate knowledge of regional materials."

GRADUAL CHANGE

Bishop, who teaches classes on the future of energy and the environment at the University of Houston, says one of his international students walked downtown and was surprised not to see anyone on the sidewalks.

"He asked, 'Where is everybody?'" Bishop says. "Walkability is not yet part of our culture, but I do believe developers will start giving people more options for getting around easier and safer. I think these will be treated as amenities because now people are thinking of it."

The 1990s, he points out, was the first decade in half a century in which Houston's urban area actually increased in population. Although the suburbs are still growing faster than the inner city, there is definitely a growing interest in living closer in, especially among singles or married people without children.

"I don't think suburbs are going away soon, but I do think that, in the long run, they will have more walkability to them" he says.

"The turnover we are talking about is a slow one. Houston is what I call a post-World War II city as opposed to cities in the East or in the North. It's not going to change in five years. Culture changes ever so slowly. It changes one person at a time, but over time you will see our culture change gradually." ■

nbradford@bizjournals.com • 713-395-9629

TIME-TESTED TRADITIONS

- Orient buildings to capture the breeze and acknowledge the sun.
- Use shade around structures.
- Install windows that open and ventilate.
- Use attic fans as an alternative to air conditioning on moderate heat days.
- Design screened and front porches.
- Raise foundations on pier and beam.
- Design buildings with overhangs for shade and water management.
- Use local materials in construction.